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Student and Faculty Reflections of the Hidden Curriculum: How Does the Hidden Curriculum Shape Students' Medical Training and Professionalization?

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Abstract

The hidden curriculum, or the socialization process of medical training, plays a crucial role in the development of physicians, as they navigate the clinical learning environment. The purpose of this qualitative study was to examine medical faculty and students' perceptions of psychological, moral, and spiritual challenges during medical training in caring for critically ill patients. Focus groups were conducted with 25 Harvard Medical School (HMS) students, and interviews were conducted with 8 HMS faculty members. Five major themes emerged as important in shaping students' medical training experiences. First, students and faculty discussed the overall significance of the hidden curriculum in terms of the hierarchy of medicine, behavioral modeling, and the value placed on research versus clinical work. Second, respondents articulated values modeled in medicine. Third, students and faculty reflected on changes in student development during their training, particularly in terms of changes in empathy and compassion. Fourth, respondents discussed challenges faced in medical school including professional clinical education and the psychosocial aspects of medical training. Finally, students and faculty articulated a number of coping mechanisms to mitigate these challenges including reflection, prayer, repression, support systems, creative outlets, exercise, and separation from one's work. The results from this study suggest the significance of the hidden curriculum on medical students throughout their training, as they learn to navigate challenging and emotional experiences. Furthermore, these results emphasize an increased focus toward the effect of the hidden curriculum on students' development in medical school, particularly noting the ways in which self-reflection may benefit students.

Keywords

professionalism, hidden curriculum, medical education, training

Introduction

The "hidden curriculum" in medical training is used to describe the behaviors, attitudes, assumptions, and beliefs of medicine that are instilled in medical students beginning in the first year of training and becoming more salient throughout residency.[1-4] Hafferty[1(p404)] refers to the hidden curriculum as "the commonly held 'understandings,' customs, rituals, and taken-for-granted aspects of what goes on in the life-space we call medical education." As opposed to the formal curriculum that occurs in the classroom through lectures, the hidden curriculum exemplifies the "cultural process" of medical training through the socialization of physicians, as they internalize the behaviors, attitudes, and values that are modeled to them in the "moral community" of medical school.[1-5]

As Ozolins et al[6(p610)] note, the *science* of medicine is associated with the formal curriculum, while the *art* of medicine is

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Table 1. Semiscripted Protocol for Harvard Medical School Student Focus Groups and Individual Harvard Medical Faculty Interviews.

Harvard Medical School (HMS) Student Focus Groups:

1. Reflecting back, what were your original reasons and motivations for entering medical school?
2. In what ways have you found yourself changed either positively or negatively through your training?
3. As you've seen patients suffer throughout your clinical training, how have you processed and dealt with that suffering?
4. As medical students, we receive extensive formal instruction in the form of lectures, tutorials, and other didactic sessions in parallel with more implicit or hidden instruction such as the hospital culture and customs and interactions with attendings and residents. How would you describe the hidden/informal components of the curriculum at HMS and affiliated hospitals?
   Prompts In what ways do you feel affected by these forces as a trainee? How important do you feel the informal and hidden curricula are for shaping your development as a physician, both positively and negatively? Considering implicit instruction in the hidden curriculum, what do you feel are the overarching values emphasized/modeled in medicine? How does this model resonate with you and compare to what you personally believe regarding the ideal physician?
5. What, if any, have been the resources and/or practices that help promote those [your?] values and ideals in the midst of your work? What role, if any, do your spiritual beliefs/practices play in promoting those values?
6. How, if at all, have your religious and/or spiritual beliefs/practices changed in the course of your training?

For Harvard Medical School (HMS) Faculty (Interviews)

1. What aspects of the medical school training at HMS would you say are the most challenging for students?
2. How do you see students coping with some of the challenging experiences they encounter during their training?
3. What changes do you notice in students over the course of their training? Do you see a change in levels of empathy/compassion in students over the course of their training?
4. What values or virtues would you say are most highly regarded or most prevalent in the practice of medicine?
5. What gaps, if any, do you see in the medical curriculum? What place, if any, does religion/spirituality have in the curriculum?
6. How would you describe the hidden/informal components of the curriculum at HMS and affiliated hospitals?
7. What do you consider to be important characteristics/practices for physician well-being?

related to the informal and hidden curriculum.[6] This notion of the hidden curriculum is often distinguished from the informal curriculum. While the informal curriculum refers to the specificities of the hidden curriculum that occur outside the hospital atmosphere, the hidden curriculum encompasses the broader culture of medical training.[7]

The hidden curriculum is comprised of several important elements, including role model figures, rules and regulations, medical ethics, medical lingo and jargon, the development (or loss) of professionalism as well as the power hierarchy in medicine.[1,4,8-11] Often, the content of the hidden curriculum in the clinical learning environment conflicts with what is taught in the formal curriculum in the classroom, and students must navigate these differentiations, especially if and when they may encounter gaps in professionalism and ethical issues.[1,2,11-13] In addition, several studies have documented the changes, often negative, in students' development due to the various attitudes and values that are modeled to them during their medical training.[7,14]

The importance of the hidden curriculum is not to be overlooked.[4,6,15] While numerous studies have considered the hidden curriculum from the perspective of medical educators, few studies have evaluated the hidden curriculum from the perspective of students.[6] Our study builds on Ozolin et al's study[6] of students' views of the hidden curriculum in considering students' experiences and perceptions of the hidden curriculum in addition to those of faculty members at the same institution. The purpose of this study was to qualitatively describe Harvard Medical School (HMS) students' psychological, moral, and spiritual challenges and development during the training process of caring for critically ill patients. Our primary research question was how would you describe the changes that have taken place within you as a person in the course of learning how to care for seriously ill hospitalized patients? We also carefully examined the ways in which medical students responded to these changes during their training, in particular considering the challenges they encountered in the hidden curriculum.

Method

The data for this study come from focus groups conducted with 33 students from HMS and Harvard Divinity School and semi-structured interviews conducted with 11 faculty members from both institutions. The data for this article are drawn specifically from students and faculty from HMS for a total of 25 students and 8 faculty members (total sample = 33). The protocol was approved by the Harvard University Faculty of Medicine Institutional Review Board (IRB), and documentation of consent was waived by the IRB. Five focus groups were conducted with students from HMS and included 3 to 5 students per focus group (N = 25), and interviews were conducted with faculty from HMS (N = 8) during 2013 (see Table 1 for interview protocol). Due to the logistical challenges of scheduling a single meeting with multiple senior faculty, we decided to conduct one-on-one interviews with faculty members. We chose to conduct focus groups with students in order to increase the number of students and the range of perspectives and experiences among senior medical students. The interviews and focus groups ranged from 30 to 120 minutes in duration, and the respondents also filled out an anonymous online survey to obtain demographic information. Respondents received a US$25 gift card for participation in the study.

The interviews and focus groups were transcribed and were then imported into the qualitative software program, NVivo (10, QSR International), for data analysis. The data were examined by 5 independent reviewers from 5 different disciplines including psychiatry, chaplaincy, public health, medicine, and theology in order to create a single coding scheme. Three individuals from 3 different disciplines (medicine, chaplaincy, and sociology) then independently coded the data according to the principles of grounded theory.[16] A κ score[17] was calculated (.75), and the coding was compared across the 3 coders to develop 1 master coding list.

Results

The total sample included 33 respondents (51.5% male) of 25 HMS students and 8 HMS faculty. The HMS students were primarily in their fourth year, and eligible Harvard faculty and administration were faculty members identified as being interested in this topic (see Table 2 for demographic information on participants).

Five major themes emerged from the student and faculty responses in the interviews and focus groups (see Table 3). First, respondents commented on the hidden curriculum broadly in medical school. Second, the theme of values modeled in medicine was also important. Third, students and faculty described the changes and development during medical training. Fourth, respondents noted the challenges of medical training, and finally, students and faculty articulated coping strategies for dealing with the difficulties in medical school.

Hidden Curriculum

Students and faculty spoke of the hidden curriculum broadly and of its impact on their training. Four major themes emerged within the theme of the hidden curriculum: the hierarchy of medicine, behavioral modeling, research versus clinical work, and the importance of the hidden curriculum. First, the hierarchy theme was defined as the hospital culture that creates and reinforces power differentials in clinical team environments. As 1 female medical student stated, ''You have to learn when it's okay to talk, when it's okay to ask questions, and when you need to just kind of be a fly on the wall. I think that's something that no one can teach you and you just have to pick it up'' (Respondent 29). Students also spoke of the importance of team dynamics in the hierarchical system, especially in terms of learning how to interact with others. Second, a majority of students and faculty spoke of behavioral modeling that was defined as student observations and perceived expectations derived from resident and attending behavior as well as attitudes within the hospital culture. Students and faculty spoke of ''good'' behaviors specifically in terms of positive role models and mentors. On the other hand, faculty and students described having observed ''bad'' behaviors including ''making fun'' of patients and objectifying patients. While students did often note these poor behaviors, some of their reflections and the faculty comments reveal that students were able to critically consider these observations: ''In fact, we, a number of my students the other day, commented that a number of the doctors they saw were not as patient as they had hoped. In other words, they maybe cut patients short or didn't spend as much time'' (Respondent 18, Faculty Member).

The third theme within the hidden curriculum was the importance of research in addition to clinical work. As one student notes, ''That's the ethos. It's not good enough to just be an excellent clinician'' (Respondent 24), and another student responds to this comment in the focus group: ''I think that's reinforced by students too, not just faculty. I've heard students express that view'' (Respondent 20). Finally, students and faculty spoke of the importance of the hidden curriculum as a reflection on the impact of the hidden curriculum on student professional development. Students consistently spoke of the hidden curriculum as highly influential, especially in terms of their decision making in medical school: ''I think they're [hidden curriculum] extremely powerful, and it definitely has influenced decisions I've made. I kind of feel bad reflecting on it now, but I'm absolutely sure they've made a huge impact on decisions, behaviors'' (Respondent 22, Student). These cultural norms modeled by others higher up in the hierarchy greatly influenced students' engagement and early practice of medicine.

Values Modeled in Medicine

When asked about the values of medicine, students and faculty elaborated on a variety of ideals including efficiency and integrity. Excellent patient care was also highly valued, specifically in terms of being a compassionate and thoughtful/respectful clinician, providing patient-centered care and listening to patients. As one HMS faculty member responds to the question of the values of medicine: ''In general, integrity, compassion, love, respect, and being a good listener'' (Respondent 6). Students also noted evidence-based medicine as an important value in medicine: ''I think evidence-based medicine in terms of referencing literature is really highly valued, and I like that. There's actually less rote memorization and just spitting out information than I expected and people challenge you to back up your findings and if you can cite where the study came from, I think that's really adding value and I think that's a really great thing that I've learned from HMS'' (Respondent 20, Student). Students and faculty also mentioned the importance of teamwork and communication.

Changes and Development During Training

Students and faculty spoke of development through medical school and in particular during the third year. They articulated these changes in terms of empathy and compassion, describing the development of as well as the loss of empathy and compassion. One student stated, ''I feel you become very desensitized during your third and fourth-year training, and I think someone said 'People who are the most sympathetic and empathic tend to be the ones that tend to get jaded more quickly and burnt out towards the end of the third year.' And I think that's true in a lot

Table 2. Demographic Information of Harvard Medical School Students and Faculty Interview Participants.

	N	%
	33[a]	100.0
Female gender	16	48.5
Years in practice/service	28	
Medical trainee[b]	20	71.4
Faculty, practicing 8–20 years	5	17.9
Faculty, years practicing < 30 years	3	10.7
Interaction setting	33	
HMS student focus group	25	75.8
HMS faculty interview	8	24.2
Medical specialty	28[c]	
Internal medicine	11	39.2
Surgical specialties[d]	4	14.3
Neurology[e]	3	10.7
Psychiatry	2	7.1
Pediatrics/pediatric subspecialties[f]	5	17.9
Other subspecialties [g]	3	10.7
Do you consider yourself Hispanic or Latino?	33	
Yes	3	9.9
No	30	90.9
What race or races do you consider yourself to be?	32	
White	18	56.3
Asian	8	25.0
Black or African American	5	15.6
Arab	1	3.1
Which of the following best indicates your religious affiliation?	33	
Protestant	16	48.9
Roman Catholic	5	15.2
None	5	15.2
Jewish	4	12.1
Buddhist	1	3.0
Hindu	1	3.0
Other Christian[h]	1	3.0
If Jewish, would you say you are:	3	
Reform	2	66.7
Orthodox	1	33.3
If Christian, do you consider yourself evangelical?	18	
No	15	83.3
Yes	3	16.7
How often do you attend religious services?	33	
Several times a week	1	3.0
Every week	7	21.2
Nearly every week	0	0.0
Two to three times a month	4	12.1
About once a month	4	12.1
Several times a year	7	21.2
About once or twice a year	3	9.1
Less than once a year	6	18.2
Never	1	3.0
To what extent do you consider yourself a religious person?[i]	33	
Very religious	7	21.2
Moderately religious	6	18.2
Slightly religious	12	36.3
Not religious at all	8	24.2
To what extent do you consider yourself a spiritual person?[i]	33	
Very spiritual	8	24.2
Moderately spiritual	14	42.4
Slightly spiritual	6	13.6
Not spiritual at all	5	15.1

[a]When the totals do not equal 33 for each of the categories, it means that the respondent(s) did not provide a response for the particular question.
[b]The category "Medical trainee" includes students in the fourth year, fifth year MD/MPH, and postgraduate year 5.
[c]The 5 respondents who did not provide a medical specialty were all students.
[d]"Surgical specialties" includes surgery and orthopedics.
[e]One respondent reported internal medicine and neurology. This response is recorded here in neurology.
[f]"Pediatric subspecialties" includes pediatric neurology, pediatric critical care, and pediatric anesthesiology.
[g]"Other subspecialities" refers to anesthesia/critical care, dermatology, and radiation oncology.
[h]"Other Christian" refers to Sabbatarian Christian.
[i]This question comes from Fetzer's Institute Multi-Dimensional Measurement of Religiousness/Spirituality for Use in Health Research. (Adapted from Fetzer Institute & National Institute on Aging Working Group. Multidimensional measurement of religiousness/spirituality for use in health research. Kalamazoo, MI: Fetzer Institute; 1999.)

of ways'' (Respondent 33). Respondents reported seeing students or themselves becoming cynical or embittered by medical school experiences, while others described no change at all in empathy and compassion. A majority of students and faculty described development during medical training in terms of a growth in confidence, comfort, and maturity, and as one student stated, ''you really do become a professional in the true sense of the word'' (Respondent 25). Some respondents described changes in behaviors based on efficiency and time management, but these changes were not always positive as some students noted their increasing impatience both in their professional and personal lives. Finally, students also mentioned changes in religion and spirituality during their medical school training, which has been reported in a previous study.[18]

Challenges During Training

Students reported facing a number of challenges during their medical training. Both students and faculty articulated these challenges in their professional training in terms of acquiring and assimilating a large knowledge base and facing emotional experiences in the clinical environment. One student described preparing oneself for the challenges of working with critically ill patients: ''I think one thing that was harder for me with adults was this loss of dignity, this loss of self, and I hated seeing. for instance, people say, 'How could you deal with sick kids?' But, for me, there's nothing sadder than seeing an adult who is now in diapers or has neurological problems and has lost control of their limbs when they used to be a strong, healthy, athlete or something'' (Respondent 10). Both students and

Table 3. Salient Quotations From the 5 Main Themes From Focus Groups and Interviews With Harvard Medical School Students and Faculty.[a]

Theme #1: The Hidden Curriculum

- I still think of hidden curriculum as, you watch your peers and you watch higher up in the hierarchy attendings or residents or interns or even just other medical staff . . . But even behaviors about what you're "rewarded for" in the hospital, those kinds of behaviors that you observe among staff and then between you and other staff. I think that's where a lot of the hidden curriculum comes out, too. Even the negative stuff you're talking about. So I think there's a lot of positive emulated behaviors. But I think there's a lot of other emulated behaviors that are what we see and then learn from in terms of behaviors that are not so good. And I think that's where we pull out what we interpret as the political pieces. (Medical Student—Respondent 13)
- I think that's sort of the part of the being molded into a professional through third year is sort of accepting parts of the hidden curriculum and sort of becoming a team member in various ways and understanding the way the hospital system works and I think at some points it serves you well and at some points you realize that you might not be acting sort of the positive naive way that you wish you always would (Medical Student—Respondent 25)

Theme #2: Values Modeled in Medicine

- I think honesty comes up to be huge, I think particularly with training. That's one of the things that we try to impart really early on is that integrity is of very high value. I think accountability is very highly valued. (Faculty Member—Respondent 19)
- I think in the surgical specialties, it's like along with the team work, it's really appreciated when you are working really hard and you learn to trust other people and know what your boundaries are. What your limits are. Just other values that are being taught? I think that the residents I admire most are people who are very passionate about what they're doing. Very interested, interested in the evidence behind things, like how can we rationally understand what it is that we're doing. (Medical Student—Respondent 28)
- I think really caring for patients. I do see people in dealing with other things, they will you know, 'we have to think about the patient, what's best for the patient,' really trying to make that a priority. And I see that happen in administrative leadership, which I think is a really nice part about being part of the system, too. (Faculty Member—Respondent 26)

Theme #3: Changes and Development During Training

- I think being a third year, especially, makes you much more comfortable talking to people. I think after you are forced to go into a room with a stranger and ask very personal questions, you're less afraid of people, kind of less intimidated by people. In all of my interactions, I find that I'm more comfortable just having a conversation and starting a conversation. (Medical Student—Respondent 4)
- I did an ICU rotation and we lost like ten people in four weeks, and it just stopped affecting me. You know what I mean? And it was like exactly how I felt. I was just going through the motions. (Medical Student—Respondent 12)
- I think students in their third year seem to finally be seeing it all come together as they start to see patients and I see a certain sort of contented relaxation with many of them. They're finally applying what they've been learning how to do, and for some that I think continues because they know what they want to do, they're not that anxious about it. For others though, it gets into the fourth year and they start to think about what residency should they do, what specialty are they interested in, and then a certain kind of competitiveness around getting into the better programs. I think sometimes that anxiety sort of ramps up again in the fourth year. (Faculty Member Respondent 5)

Theme #4: Challenges During Training

- I had one experience early in third year where a patient that I was helping to take care of passed away partly due to what I thought was an overly heroic surgery that wasn't going to be curative, though the surgeons had curative intent, and the patient didn't fully understand why she was having a procedure. Anyway, it ended poorly. The lady aspirated in the SICU a few days later and we all saw it coming, but I was really upset by it. (Medical Student—Respondent 24)
- I think, you see students who are at sea because they don't know what the rules are – you know, this expectation sensitivity thing is one thing when you're gonna get a grade on your organic chem test, and you know what the curve is and blahbdy blah, and now you're in this clinical environment. You know, does it matter that the nurses liked you or didn't? (Faculty Member—Respondent 17)
- What are the challenges? I think there are time pressures. There are certainly academic and intellectual pressures. I think there are personal pressures and balancing everything. (Faculty Member—Respondent 16)

Theme #5: Coping Within Training

- The problems are a lot of times, that you don't have any control. But both when you are in a position to have some control to really have confidence enough to say this is really important that I set things up so that I can do the other things that are important to me. Whether that's having a family or doing other activities that are important with other people or in your community or to exercise or to sleep or to eat, or to take good care of yourself. (Faculty Member—Respondent 7).
- If at times when attendings or residents would take a moment when say if a patient passes away or something that isn't directly connected to care, but it's big for the patient, they take a moment and pull me aside or they kind of stop the train of motion and say let's just talk about this. This is why this matters and why it's so easy for us to think it doesn't matter. That's often a time when you're a third year, you're just kind of looking around like am I supposed to care about this? What's the intern doing? Are they checking out? Should I check out? Those opportunities I feel like are chances to breathe and to reflect.(Medical Student—Respondent 23)

[a] This table illustrates 5 major themes that emerged in the data with the most frequencies. Because of space, we do not report here an exhaustive list of each of the subthemes for each major theme.

faculty also described challenges in confidence and identity, as students faced challenges navigating their career goals and paths. As one faculty member notes: "A lot of them have self-assuredness issues. Am I good enough? Will I be able to make it here, seeing all of their classmates" (Respondent 6). Students and faculty also described challenges with maintaining a

positive work–life balance. Finally, students and faculty noted the difficulties in navigating interpersonal relationships in terms of dealing with competition among students, navigating dynamics among team members, finding and building role models, dealing with the lack of communication among medical team members, and facing tension with loved ones.

Coping

While students experienced a variety of challenges throughout their medical training, they did rely on a number of coping strategies. Many students and faculty noted the importance of having a support system whether it be family, friends, or role models within the medical system. As one female medical student notes, ''for me, it's been a lot of mentors, people that you find who have the same values as you and who really prioritize their life to be what you would like yours to be, that have really been the biggest resources for me, and just really models of kind of medical life in spite of being at HMS sometimes'' (Respondent 29). Faculty also described emotional maturity as a coping strategy of using innate, developed resiliency mechanisms. Students and faculty also spoke of a variety of coping practices including reflection, prayer, repression, creative outlets, exercise, and separation from one's work. Students spoke of reflection as an important coping strategy that took many forms: Some described reflection in terms of talking and ''venting'' with others or journaling, while others spoke of Patient-Doctor 3 (PD3), a case-based course for third-year HMS students to prepare them for patient care, as an opportunity for reflection. Some students spoke of reflecting too often while others not reflecting enough and putting it off. Faith and prayer also played an integral role in coping with the challenges of medical training, particularly with watching patients suffer: ''the only way I could deal with it [emotional experience in clinical training] was praying, and yeah, you kind of just find comfort in believing, in really believing, that this is not the all there is to it, that it's not the end'' (Respondent 1).

Discussion

In addition to examining faculty perceptions of the hidden curriculum, this study critically considers the ways in which medical trainees understand and internalize various aspects of the hidden curriculum in their professionalization as physicians. Students and faculty noted the significance of the hidden curriculum in recognizing the importance of research versus clinical work, and they also acknowledged other such values modeled in medicine such as efficiency, integrity, excellent patient care, and teamwork. Many of these values modeled to students through the hidden curriculum influenced their development in their medical training in terms of their orientation toward empathy and compassion for patients, their confidence and maturity, and efficiency, as students learned to adopt many of these values and adapt to the pressures of the medical environment that they came to understand through the hidden curriculum. Medical trainees and faculty members also articulated a number of challenges students faced during their training and the coping mechanisms they employed as a result. As the data from this study demonstrate, the students' development and changes throughout their training are directly influenced by the hidden curriculum and the values and behaviors that are modeled to them.

These 5 themes are consistent with other studies on the hidden curriculum in medical school. Lempp and Seale's qualitative study[8] of the hidden curriculum in medical education revealed that personal encouragement from positive role models was an important factor in students' training, which is similar to our finding of positive behavioral modeling in the hidden curriculum. Other studies have also noted the importance of the hierarchy in medicine in terms of learning through the hidden curriculum.[4,8,19,20] Similar to our finding of the importance of teamwork in medicine, studies have addressed the effect of collegiality in the medical environment as the relationship between group membership and individual performance as well as the importance of communicating and working within teams.[4,20]

Related studies have also found that students believe that excellent and patient-centered care and compassion are crucial to the practice of medicine and that the hidden curriculum is highly valued among students as they are transition into becoming physicians.[14,15,21] Previous work has considered the importance of the hidden curriculum, as it contributes to the development of professionalism for physicians-in-training, and our study confirms these findings.[10,21] In addition, the data from this study confirm previous findings that students are not only passive recipients of the hidden curriculum but also internalize what they learn as it contributes to their identity as soon-to-be physicians.[11,19]

There is little opportunity within the formal medical curriculum to discuss the various emotional experiences of students, but self-reflection through small group discussions and mentorship is especially important in order to maximize the positive effects of the hidden curriculum and to think critically about the mixed messages medical students may receive between the classroom and the clinical learning environment.[12] In addition, several other studies have noted that medical educators need to recognize the role of internal and external factors in medical training that students receive.[7,22,23] The data from this and previous studies inform the future development of physician well-being curricula and wellness initiatives, as the data clearly articulate the content of the hidden curriculum and its effects in an important way. Curricula are needed to help students understand ways to reduce physician burnout and compassion fatigue by engaging their own spirituality into their medical practice as physicians.

This study is limited by the fact that it draws on qualitative interview and focus group data from 1 medical school and cannot be generalizable to all medical training programs in the country. Despite the limitations of this study, the data provide insight into the ways in which medical students respond to the hidden curriculum and adds to the existing literature on the importance of the hidden curriculum to students' socialization

in medicine. Future research that provides a comprehensive understanding of medical students' psychosocial experiences and emotional challenges during their training will be helpful in designing opportunities for students to reflect on their experiences so that they can focus on providing the best care possible.

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