First-Year Medical Students' Attitudes toward Diversity and its Teaching: An Investigation at One U.S. Medical School

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ABSTRACT

Purpose. To investigate whether medical students conceptualize culture and cultural diversity best within "categorical" or "cultural sensibility" teaching models.

Method. In spring 2002, first-year medical students at the University of Illinois Colleges of Medicine at Chicago and Urbana-Champaign completed a previously developed questionnaire. A self-selected subset participated in focus groups. The questionnaire collected data on attitudes toward race, culture, and diversity education and how these concepts relate to medical practice; responses to a case scenario; attitudes toward cultural tolerance; definitions of key terms and sense of cultural belonging; and feedback on the questionnaire. The focus groups discussed the two models for teaching diversity.

Results. Questionnaires were returned by 111 of 153 students (72.5%). Generally, the students displayed open attitudes about the balance between cultures of origin and the culture of the wider community in which immigrants may live. However, with very personal issues there was a tendency to stay with the familiar. These students had an impression of ethnic groups as very discrete and well defined. Skin color and issues of race remained a significant barrier to dialogue regarding diversity. Students were overwhelmingly in favor of the cultural sensibility teaching model that emphasizes the fluidity and malleability of culture.

Conclusions. The students in this study were not familiar with key terms on culture and race, and struggled with the issues that diversity raises in medical practice. Although students held open attitudes toward equal opportunities and multiculturalism, differences among and within groups indicated that all students would benefit from a curriculum that emphasizes self-reflection and diversity teaching.

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In the late 1960s, medical schools across the Unites States began recognizing the effects of racism and how racism might lead to cultural insensitivity in medicine.[1] Since then, how to teach medical students to understand and contend with race and culture has been a critical focus for medical education reform. As a recent study has shown, despite these efforts, problems addressing race and culture in medical practice continue. Schulman and colleagues found that women and African Americans with the same set of signs and symptoms were less likely than white men to be referred for cardiac catheterization.[2] Teaching medical students to recognize the ways that their potential biases interact with the cultural atmosphere of medicine has, therefore, become a more central concern for health care delivery. The issue is made more complex because there is little consensus on the meaning of such widely used terms as race, ethnicity, and culture. In this paper, we acknowledge that individuals define themselves in different ways and that race and ethnicity may have different meanings for each individual.

The American Medical Association (AMA) has a detailed *Cultural Competence Compendium* that includes a report entitled "Enhancing the Cultural Competence of Physicians."[3] Training physicians to work with culturally diverse

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populations has often been seen as a commendable goal, but not as pressing as other issues. Offering cultural issues as electives in medical school demonstrates the often weak support the study of these topics has in the medical establishment. Since the 1970s, increased recruitment of minorities into medicine has often been perceived as a sufficient answer to these concerns.[1] By increasing the number of minority physicians, it is believed that medical education provides practitioners who can then work with minority populations. However, the shifting demographics of medicine and society will require all physicians to approach concepts of race and culture with a more critical eye. There also needs to be an acceptance of the notion that no individual, irrespective of his or her minority status, is an expert on culture simply by virtue of being part of a minority. Although some minority professionals may share the same race and/or ethnicity as their patients,[4] this does not necessarily bring with it the skills to be sensitive to the cultural needs of these patients. Additionally, a minority professional from one racial or ethnic group may be no better equipped to understand individuals from different minority groups. Despite the presence of minority professionals who act as informal and formal educators about race, culture, and ethnicity, a need remains to equip all professionals with a set of critical tools for approaching patients with increasingly diverse backgrounds.

The AMA[3] stresses that medical schools and other medical institutions should offer educational programs about gender, race, and cultural issues to staff, physicians in training, and students. These policies reflect the AMA's consensus that knowledge and tolerance of diversity is an aspect of effective health care delivery, and that physicians and health care organizations must be encouraged to respond to the social, cultural, economic, and political diversity of their communities, including serious consideration of cultural solutions to illness (i.e., cultural understanding and alternative treatment remedies).

The Categorical Approach to Teaching Cultural Issues

Many educational programs in North American medical schools endeavor to teach "cultural competence."[5–8] Nunez[9] defines cross-cultural efficacy as the caregiver's effective interactions with individuals of different cultures. Neither the caregiver nor the patient has the preferred view. Although the term *cultural competence* is more widely used, it often has different meanings.[10]

The "categorical" approach to teaching cultural competence stresses the need to learn about groups that are different from one's own group. This approach views groups as discrete and homogenous entities, and promotes thinking about individuals as group members rather than as unique individuals. As a concept, "competence" disregards the many nuances that individuals possess with regard to power, background, and experience. More importantly, "competence" curricula generally present culture as a set of static facts that can be learned. As part of a broader recent move in medical education to develop "core competencies" that can be objectively tested, the categorical approach reduces cultural diversity to a core set of beliefs and thoughts that are then extrapolated to a given minority group.

Cultural Sensibility

In this article, we propose an alternative to the categorical approach: the broader concept of "cultural sensibility." Sensibility relates to a person's moral, emotional, or aesthetic ideas or standards. The sensibility model has communication at its core and has a process-oriented axis that endeavors to teach medical students to think critically about culture. In this way, students learn to view culture as constantly in flux and gain knowledge about culture through careful and thoughtful interactions with patients, colleagues, and by exposure to various media.

The cultural sensibility approach focuses less on specific knowledge and more on students' self-awareness and reflection. This approach's underlying philosophy is that unless students are aware of their own perspectives on the range of cultural issues, they are poorly positioned to deliver health care equitably to patients of diverse backgrounds. Cultural sensibility is more challenging because it attempts to go beyond superficial understandings and asks students to question their own perspectives and how they might have arisen. It does not attempt to judge perspectives as being right or wrong but asks students to consider which of their perspectives might affect their practice as future clinicians. The assumption behind this approach is that we need to teach students to ask patients about their values and beliefs rather than teaching them to use a given corpus of knowledge that is applied generally to the patient based on perceived affiliation with a group or culture. It is more similar to the "cultural humility" approach.[11]

It is in this context that we explored attitudes toward cultural diversity and how diversity is taught to medical students. In our study, we sought to determine whether medical students conceptualize culture and cultural diversity within the categorical or cultural sensibility model to help establish a focus for medical education programs.

Method

We undertook our study in spring 2002 with first-year medical students at the University of Illinois College of Medicine at Chicago and the College of Medicine at Urbana-Champaign. We thought this university was a good site for our study because its demographics reflected the typical racial, cultural, and

ethnic characteristics of the United States and it offered campuses with contrasting settings. We used a previously developed questionnaire[12,13] made more relevant to the American audience by the use of appropriate terminology. At the time of our study, 125 first-year students were registered at the Urbana-Champaign campus and 185 at the Chicago campus. At the Colleges of Medicine, attendance at lectures is not mandatory so it was difficult to be certain of the exact number of students who would be present at the general meetings scheduled immediately after morning lectures. In addition, students who were present at the meeting were not required or compelled to participate in our study.

Following a brief presentation by one of us (ND), we asked students to complete the questionnaire at an open and voluntary meeting, and we also asked the students to attend focus groups. The focus-group participants were self-selected because ND was unable to control who volunteered, the times that rooms were available, and students' timetables, all factors that affected the number of students who participated. ND asked the students to give an identification number, their gender, and the country in which they had lived for most of their life. (To avoid repetition, we will detail the questionnaire contents in the Results section.)

During the focus groups, ND asked the students about each part of the questionnaire and the questionnaire as a whole. Students were also asked to discuss how they defined terms in the questionnaire such as race and ethnicity and whether there were any concerns about using these terms and the way they are generally understood. Students were then asked to consider the teaching of cultural diversity to medical students. Toward the end of the focus groups, ND asked the students about the two models of teaching diversity: categorical and cultural sensibility. A discussion of these models followed. ND ran four focus groups, two at each campus. All ethnic and racial variations were present in at least one of the four focus groups. Recordings of the focus-group discussions were transcribed verbatim and themes identified. One theme, feedback on the questionnaire, was predetermined because it was part of the focus-group agenda. Detailed analyses of the focus-group discussions are not presented here.

We used a standard statistical software to analyze the data and used chi-square tests to make comparisons between groups.

Results

Response Rates and Respondents' Demographics

The number of questionnaires the students took did approximate with estimated attendance of about 50% of the total class size. A total of 111 students completed the questionnaires. Sixty-four of the 125 students at the Urbana campus took questionnaires; 54 were returned (84.4%). Of the 185 students at the Chicago campus, 89 took questionnaires; 57 were returned (64%). Examinations followed shortly at both campuses, and students gave this as a partial explanation for the lowered attendance at lectures.

Fifty-four (48.6%) of the respondents were men and 57 (51.4%) were women. Forty-two percent of the first-year classes at the two campuses as a whole were women, so women were over represented in our study sample. Race and ethnicity broke down into the following groups: 56 of the respondents were white (50.5%), 27 were Asian (24.3%), 11 were black (9.9%), 13 were Hispanic (11.7%), three were of mixed race, and one was "Other." This demographic information was obtained from part V of the questionnaire. Compared with the first-year classes as a whole, white students who completed the questionnaire were slightly overrepresented by one percentage point in our sample and Asian students were underrepresented by four percentage points.

Frequency Rates for the Questionnaire

Part I of the questionnaire consisted of 25 statements to which the following answers were available: strongly agree, agree, neutral, disagree, strongly disagree, or unsure. There were statements related to attitudes about different cultures and how different cultures might interact, as well as statements on diversity education and diversity in medical practice. Table 1 shows the frequencies of the responses to part I of the questionnaire and those statements for which there were significant differences when different groups were compared. Students showed generally open attitudes about the balance of cultures with broad support for the notion that immigrants should be able to retain some of their cultures of origin but also adapt to the new environment. There was strong agreement that doctors have prejudices, but less strong agreement that doctors need to be aware of patients and colleagues with different cultures in their practice. For statements reflecting attitudes about specific cultures, the stereotype about Asians pushing their children to do well in school generated the most agreement, but also a high neutral response. Responses to the statement about didactic teaching of cultural diversity were spread across the scale.

Part II of the questionnaire consisted of an imaginary scenario: "You are invited to the home of your friend's parents. Your friend is of a different ethnic background than yourself. How do you think you might prepare yourself for the visit?" We made no suggestions to students about potential responses. Students responded in the following ways: ask the friend what to do (49%), do nothing because they are a friend

Table 1

Frequency of the Responses to 25 Statements about Cultural Issues from Part I of a Questionnaire Given to 111 First-Year Medical Students at the University of Illinois Colleges of Medicine at Chicago and Urbana-Champaign and Significant Differences between Groups, 2001

	Students' Level of Agreement with each Statement % (no.)							Significant Differences between Groups (p value)						
Statement on	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Unsure	Did Not Answer	Campus	Gender	Race	White and Asian Students	White and Black Students	Asian and Black Students	White and Hispanic Students
Attitudes about the balances between cultures														
1. All individuals have a responsibility to learn about how to deal with those who are different to themselves	56.8 (63)	34.2 (38)	4.5 (5)	1.8 (2)	.9 (1)	1.8 (2)	0.0					.029 Black ↓		.002 Hispanic←
2. Minority members of a population should conform to the customs and values of the majority	0.0	8.1 (9)	12.6 (14)	42.3 (47)	34.2 (38)	2.7 (3)	0.0	.038 Chicago→	.047 Female→		.044 Asian→	.037 Black→		
3. Immigrants should be integrated into their new country without having to give up their own culture	42.3 (47)	36.0 (40)	9.9 (11)	5.4 (6)	4.5 (5)	0.9 (1)	0.9 (1)				.019 White→		.014 Asian←	.042 Hispanic←
4. Foreigners going to live in a new country should let go of the culture of the country from which they have come	0.9 (1)	1.8 (2)	4.5 (5)	42.3 (47)	49.5 (55)	0.0	0.9 (1)		.004 Female→					
6. Foreigners going to live in a new country should adapt to their new country, but not necessarily change their own culture	47.7 (53)	46.8 (52)	4.5 (5)	0.0	0.0	0.9 (1)	0.0							
14. Different cultures can be successfully blended	33.3 (37)	45.0 (50)	9.0 (10)	8.1 (9)	0.0	4.5 (5)	0.0	.019 Chicago ↓					.025 Black→	
25. It is the responsibility of the majority population to learn about minority groups	12.6 (14)	55.9 (62)	17.1 (19)	9.0 (10)	0.9 (1)	4.5 (5)	0.0							
Attitudes about doctors and cultural diversity														
5. Doctors, like all other individuals, have prejudices	72.1 (80)	24.3 (27)	2.7 (3)	0	0	0	0.9 (1)		.0001 Hispanic and black←					
8. All doctors need to be aware of the different cultures that exist within their practice	36.0 (40)	55.0 (61)	6.3 (7)	0.9 (1)	0.0	1.8 (2)	0.0		.0001 Asian and Hispanic←					
20. A white doctor is more likely than a black doctor to be perceived by patients as a competent	2.7 (3)	38.7 (43)	17.1 (19)	18.9 (21)	11.7 (13)	10.8 (12)	0.0		0.23 Black←		.003 Black←			
Attitudes about skin color and race														
7. In today's society the color of your skin does not influence how you succeed	3.6 (4)	9.9 (11)	9.0 (10)	52.3 (58)	24.3 (27)	0.9 (1)	0.0							
11. Being white carries advantages in the United States	22.5 (25)	49.5 (55)	13.5 (15)	9.0 (10)	2.7 (3)	2.7 (3)	0.0		.027 Female→	.0001 White→				
18. The color of your skin does not define your culture	27.9 (31)	52.3 (58)	3.6 (4)	12.6 (14)	0.0	3.6 (4)	0.0							
19. Black people are likely to be better at sport than at academic subjects	0.9 (1)	9.0 (10)	11.7 (13)	44.1 (49)	29.7 (33)	4.5 (5)	0.0				.029 White→			

22. The color of one's skins defines one's cultures	0.0	5.4 (6)	6.3 (7)	48.6 (54)	36.9 (41)	2.7 (3)	0.0							
Attitudes about specific cultures														
9. Arabs do not place as much value on human life as Americans	0.9 (1)	3.6 (4)	8.1 (9)	33.3 (37)	44.1 (49)	9.9 (11)	0.0							
10. There is little difference between Chinese and Japanese people	0.9 (1)	1.8 (2)	1.8 (2)	37.8 (42)	53.2 (59)	4.5 (5)	0.0			.011 Asian→	.041 Asian→	.003 White→	.021 Asian→	.036 White, unsure
12. Every culture is capable of producing culinary masterpieces	61.3 (68)	27.0 (30)	5.4 (6)	1.8 (2)	0.9 (1)	3.6 (4)	0.0			.006 Asian and Hispanic←				
15. Arranged marriages indicate the cultural inferiority of Subcontinent Asian immigrants.	0.0	0.9 (1)	5.4 (6)	45.0 (50)	45.9 (51)	1.8 (3)	0.9 (1)				.006 Asian→			
16. Asians push their children to do well at school	13.5 (15)	48.6 (54)	22.5 (25)	3.6 (4)	2.7 (3)	9.0 (10)	0.0		.016 Asian ←	.016 Black ↓				
Attitudes about Eurocentricity														
13. There is historical evidence to support the view that those of Anglo-Saxon descent are intellectually superior to other groups in society	0.0	1.8 (2)	5.4 (6)	20.7 (23)	65.8 (73)	6.3 (7)	0.0							
17. Everyone in the United States should learn English, as it is the national language for this country	36.9 (41)	48.6 (54)	5.4 (6)	3.6 (4)	3.6 (4)	1.8 (2)	0		.024 Male←					.044 Hispanic←
Attitudes about diversity teaching														
21. Through didactic learning students can understand what it is like to belong to someone else's culture	3.6 (4)	18.0 (20)	12.6 (14)	43.2 (48)	12.6 (14)	9.9 (11)	0.0							
23. Cultural diversity can be taught by just providing students facts about other cultures	0.0	5.4 (6)	8.1 (9)	58.6 (65)	27.0 (30)	0.9 (1)	0.0							
24. It is possible for medical students to be taught in the classroom about other cultures	4.5 (5)	55.9 (62)	11.7 (13)	21.6 (24)	3.6 (4)	1.8 (2)	0.9 (1)							

General note: ← means that the group shown was more likely to agree or strongly agree with the statement, → means that the group shown was more likely to disagree or strongly disagree with the statement, and ↓ means that the group shown was more likely to have the neutral response.

(39%), read up on their culture (6%), or do nothing (6%).

Part III of the questionnaire consisted of nine statements based on Bogardus' social distance scale and the responses are shown in Table 2. Bogardus' social distance scale gives a range of relationships from close personal relationship to more casual relationships to the target. The scale measures individual acceptance of the different relationships based on their closeness to the respondent. The majority of participants were equally willing to entertain notions of having people of different cultures both in close interpersonal relationships as well as in more casual interactions. Nevertheless, there was evidence that study participants grew more uncomfortable with relationships as they moved closer to their personal sphere. For example, only 68.5% of participants believed they could marry someone of a different culture, while 91.9% thought that in general it was acceptable to marry across cultures.

Students were asked to define the terms *culture*, *ethnicity*, *multiculturalism*, and *race* in the interactive video (IV) part of the questionnaire. There were also a number of questions relating to students' own understanding of culture and ethnicity: 74 students (66.7%) felt they belonged to an ethnic group, whereas 30 (27.0%) did not and 7 (6.3%) were unsure. Of the 95 definitions given for culture, 87 defined culture as a one-dimensional, socially defined concept, whereas six saw it as a self-defined concept having multiple layers. For ethnicity, 93 definitions were given and these fell into ten themes, with the three most popular being geographically defined or country of origin (30), sharing similar backgrounds (16), and one's sense of belonging and identification (8). Three students defined multiculturalism in such a way that two of their definitions could be included in two themes and another definition in three themes. Thus, we had 101 definitions that fell into nine themes, with

Table 2

Responses to Bogardus-Type Social Distance Statements* on Part III of a Questionnaire about Cultural Issues Given to 111 First-Year Medical Students at the University of Illinois Colleges of Medicine at Chicago and Urbana-Champaign, and Significant Differences between Groups, 2001

				Significant Differences between Groups (p value)				
Statement	Yes % (no.)	No % (no.)	Did Not Answer % (no.)	Campus	Ethnicity	White and Black Students	Hispanic and Black Students	White and Hispanic Students
I would be happy for two people of any two different cultures to marry, including my own culture	91.9 (102)	8.1 (9)	0.0					
I would be happy if people only married within their own culture	8.1 (9)	91.0 (101)	0.9 (1)			.001†		
I would be happy for a person of a different culture to live next door to me	97.3 (108)	1.8 (2)	0.9 (1)					.037§
I would be happy for a person of a different culture to marry someone of my own culture	91.9 (102)	7.2 (8)	0.9 (1)			.001‡		
I would be happy to marry a person of a different culture	68.5 (76)	27.0 (30)	4.5 (5)				.035‡	
I would be happy for a person of a different culture to live in the same part of town	99.1 (110)	0.9 (1)	0.0					
I would be happy for a person of a different culture to marry someone in my family	87.4 (97)	10.8 (12)	1.8 (2)		.014‡	.0001‡	.019‡	
I would be happy for a person of a different culture to live in the same country	99.1 (110)	0.9 (1)	0.0					
I would be happy to have mixed-race (dual–ethnic heritage) children	76.6 (85)	18.9 (21)	4.5 (5)	.026¶				

*Bogardus' social distance scale gives a range of relationships from close personal relationship to more casual relationships to the target. The scale measures individual acceptance of the different relationships based on their closeness to the respondent.

†Black students were more likely to respond "Yes" to this statement.

‡Black students were more likely to respond "No" to this statement.

§One Hispanic student responded "No" to this statement.

¶Students on the Chicago campus were more likely to respond "No" to this statement.

the three most common being mixing or blending of different cultures (21), the understanding individuals have of other cultures (18), and different cultures coexisting (14). Race received 89 definitions with ten identifiable themes, the three most popular being genetically defined (18), color of one's skin (17), and country of origin/nationality (17).

Part VI was feedback on the questionnaire itself (see Table 3). In addition to responding to set questions, students were given the option to write comments. Seventeen students commented on whether the questionnaire had made them feel uncomfortable; one student made two comments. The comments varied, but eight related to the way the questionnaire was worded (6) or how the responses might be interpreted (2). One student in the former group commented: "Angry due to stupid generalizations." The other ten comments were made regarding personal perspectives and students were uncomfortable about considering potentially difficult subjects including their own prejudices and limitations (7). Of the 28 students who made comments about omissions in the questionnaire, 14 made comments such as "Affirmation [sic] is the work of Satan" and "How about culture and its use for political purposes?"

Table 3

Feedback on Questionnaire about Cultural Issues Given to 111 First-Year Medical Students at the University of Illinois Colleges of Medicine at Chicago and Urbana-Champaign, 2001

Question	Yes % (no.)	No % (no.)	Did Not Answer % (no.)
Was it clear how to complete the questionnaire?	92.8 (103)	5.4 (6)	1.8 (2)
Was the questionnaire too long?	27.0 (30)	71.2 (79)	1.8 (2)
Was the questionnaire too short?	2.7 (3)	94.6 (105)	2.7 (3)
Was the questionnaire too simplistic?	24.3 (27)	73.0 (81)	2.7 (3)
Did any of the issues raised make you feel uncomfortable?	21.6 (24)	76.6 (85)	1.8 (2)
Have any issues you consider important been omitted?	24.3 (27)	64.9 (72)	10.8 (12)
Has filling in the questionnaire made you think about cultural diversity?	53.2 (59)	42.3 (47)	4.5 (5)

Students also commented about the following specific omissions: multicultural issues (3), white subcultures (3), prejudice (3), religion (3), and sexuality (2).

Forty-five students commented that the questionnaire made them think about diversity; of these, 37 were self-reflective statements with students questioning their preconceptions and understanding. Six students felt that they were very culturally aware and had already considered the issues raised in the questionnaire. The other two comments were: "I think cultural diversity is very important and should be taught in all medical schools" and "The current trend in multiculturalism, if drawn to its logical conclusion, leads to a dismissal of the notion of any absolute truth. Such a conclusions is arguably absurd, thus showing that there must be flaws in our current understanding of multiculturalism."

Differences between Groups

Differences between groups for part I of the questionnaire are shown in Table 1.

As for other differences between groups, the parents of Chicago-based students were significantly more likely to have been born in India ($p = .014$). Asian students were significantly less likely to define the terms ethnicity and race ($p < .037$ and $p < .013$, respectively). When groups of numbers large enough to allow comparisons were compared, black students were the most likely to respond and Asian students least likely to respond to definitions for ethnicity and race.

There were minimal differences between the Asian and Hispanic students. Compared with white students, Asian and Hispanic students were significantly more likely to have been born outside of the United States ($p = .0006$ and $p = .043$, respectively) as were their parents ($p <$. 0,001 for both), and Asian and Hispanic students themselves were less likely to have U.S. citizenship ($p < .0001$ and $p = .009$). Compared with white students, the parents of black students were significantly likely to have been born outside of the United States ($p = .008$). Asian and Hispanic students were also more likely to have a sense of belonging to an ethnic group ($p =$. 034 and $p = .018$) compared with white students.

Focus-Group Themes

In the focus groups, five themes emerged. We will discuss these briefly below.

Students' feedback on the questionnaire. Students' responses and comments centered on whether the questions were to be answered theoretically or based on personal experience. Students also revised some of the terms in the questionnaire to terms more familiar in the United States. For instance, a student would be "okay with" rather than "happy" with a given situation.

Race issues. Some students felt that affirmative action means black individuals in high posts are often considered less competent, and "are only there because of affirmative action."

Interaction between cultural groups. Students noted that there is often little social mixing among different ethnic groups. Some students felt this was a result of few common interests. Other students felt that students of different ethnicities could be intimidating and generally there was less interaction than there could be among groups. Black students expressed a feeling that because white individuals are often the majority, no questions are asked if they stick together, whereas other groups are criticized for doing the same. Black students in the focus groups also felt that, on the whole, white individuals have no understanding of what it is "to feel out of place in sea of whites," and that white individuals are rarely in marginal posi-

tions. This was not something that Asian students commented on.

Teaching diversity issues. Most of the students felt cultural diversity was insufficiently taught or not taught at all. They felt that classroom teaching is often not linked to the practice of medicine. Generally students felt cultural diversity teaching was needed and perhaps "whites need it more." There was an impression that minorities were better informed regarding diversity although this was challenged by one Asian male student who believed that exposure to others depended on where you had grown up rather than on your own ethnic background.

Toward the end of each focus group, ND explained the categorical and cultural sensibility approaches to teaching cultural diversity. The students identified with the cultural sensibility approach, partly because they felt increasing recognition of different groups makes the categorical approach difficult. As one student said, "One cannot personally learn about 110 cultures or whatever, . . . but one can become aware of the issues and step outside of one's own experience." Students accepted that neither they nor their patients were one dimensional. Students often had limited exposure to different groups as equals in a way that allowed dialogue.

Students' own sense of belonging. Some students of color often identified themselves with a culture of origin rather than with their American nationality. All black students born and raised in the United States did not necessarily identify themselves as American, feeling that "American to most people means a white, redneck, and blue-eyed blond person." One black student felt that the stereotypes about them being good at sports compared with academic areas are strongly held. Black students felt there was no acknowledgment that assessment instruments such as admissions tests are biased toward certain groups in their basic design.

Discussion

Our study reflected the general difficulties of undertaking surveys. Practical details such as students' timetables and room availability meant that we had to conduct the research when the students were able to attend, rather than being able to compose either homogenous or completely heterogeneous groups. Exact response rates were difficult to report because attendance was not mandatory and students were free to come and go as they pleased throughout the questionnaire administration. Focus-group participation was through self-selection. Despite stressing that we wanted to hear all perspectives, it is likely that only students sympathetic to the idea of diversity within the curriculum participated. Conversely, those students who did not see the relevance probably excluded themselves from both the questionnaire and focus groups. Another limitation is the lack of consensus on how terms in this area are used and understood. Notwithstanding the limitations, our study has some interesting findings.

Students were generally positive about the project, possibly because one of us (ND) was a practicing doctor and a visitor to the university, as well as because they had a genuine interest in subject matter of the study.

Generally the students displayed open attitudes about the balance between cultures of origin and the culture of the wider community in which immigrants might be living. Students generally disagreed with statement 7 in the questionnaire that skin color does not influence how you succeed; it is possible that nonwhite students saw white individuals in general as advantaged and white students saw nonwhite individuals as advantaged, particularly through affirmative action. Our focus groups revealed the perceived resentment of some groups about affirmative action and nonwhite students expressed concern at white Americans' misunderstanding of the amount of money that goes to support affirmative action.

Responses to statement 25 on the questionnaire—"It is the responsibility of the majority population to learn about minority groups"—may have reflected the majority view in the United States. Although the majority population is expected to learn about minority groups, this is not always seen to be a reciprocal arrangement, and some groups can be marginalized from the debate.

The questionnaire statements about specific cultures are interesting in that students responded they were neutral or uncertain, such for as statement 9: "Arabs do not place as much value on human life as the Americans." Responses to this particular statement may also have reflected students' attitudes in the wake of international events, particularly the attacks on the World Trade Center and the Pentagon on September 11, 2001, which occurred several months before we conducted our survey. Such events can bring about acute changes in attitudes toward certain ethnic groups and raise vital concerns about the ways in which the American health care system responds to needs of diverse population in a time of crisis.

The variation among the groups' responses to statement 3—"Immigrants should be integrated into their new country without having to give up their own culture"—highlighted tensions about what immigrants should do to adapt to a new environment. Students from backgrounds where immigration may have been a common experience disagreed more strongly with the idea that immigrants should adapt to a new culture at the cost of their original culture. The Chicago-campus group had significantly more students whose parents had been born outside the United States and also significantly more Asian students who were not U.S. citizens. This finding in itself may suggest that recently settled immigrants are likely to seek cosmopolitan university campuses,

which may have implications for the university's recruitment policy. Recent immigration may also explain why the Chicago-campus group disagreed more strongly that the minority should conform to the customs and laws of the majority.

Statement 16—"Asians push their children to do well at school"—elicited an unsure response from some students suggesting that students were aware of the stereotype. The minority students seemed more likely to agree with stereotypical views of other minority groups. These findings indicate that racial and ethnic stereotyping need not be negative. Positive stereotypes, while certainly less damaging, can still lead to altered expectations and beliefs on the part of clinicians. Such assumptions should therefore also be challenged and critically evaluated.

At one level students were open-minded, as indicated by their responses to the 25 statements in part I of the questionnaire; however, when it came to the very personal such as whether a student would marry someone from a different culture, the students chose to stay with what was familiar. Black students were significantly different from the other groups and least likely to be okay with someone of another culture marrying into their families. These results suggest the presence of lingering sentiments about racism and discomfort with individuals outside of one's own culture in a small subgroup of our study. We can only speculate on the effects that these findings may have in medical practice. However, they might suggest that when faced with critical questions about race and ethnicity, many students showed the ability to distance their own personal beliefs from what is best in general. This may be a more hopeful sign than the data showed at first. There is no right or wrong answer about marrying someone from a different culture. However, further investigation is warranted on the underlying reasons behind this response and the effect this may have on the way the students perceive others.

Female students in our study commented that there were more advantages to being a man than to being white. The women seemed to be less sure about those coming into the country having to conform to local customs and letting go of their own cultures. This may reflect the pressure on immigrant women to maintain family traditions after emigration; in some cultures, it is often the man who interacts most with the external world. These findings may also reflect women's greater awareness of the complexity of the issues.

Compared with white students, black students seemed more aware of issues related to skin color than the other minority groups. White students did not appear to perceive themselves as advantaged, while the other groups did perceive white students as such. The responses of the white students appeared to challenge the notion that racism is present in that they were less likely to think that doctors have prejudices or that white doctors might be perceived to be more competent on the basis of color alone. Affirmative action in the United States may make white individuals feel that being white carries no advantage. However, it is an interesting view when the wider contexts of political and economic power are considered. Black students felt patients are more likely to perceive a white doctor as being more competent than a black doctor, which may reflect the students' negative experiences. However, the difference between the white students and the black students suggests that the white students may have been unaware of some of the racism that black individuals may experience. To acknowledge that black individuals may experience racism may have been difficult for some students, or it may have been that some students did not believe that racism exists in the United States.

These differences among the groups suggest that there are unspoken and unshared assumptions that groups have about others and themselves. There appeared to be much frustration in some groups at the way other groups see themselves. The focus groups showed that there needs to be an openness and willingness to talk about these issues, because failing to do so does not resolve dilemmas. Lack of dialogue may allow views that affect clinical practice to go unchallenged. For instance, if the white students did not see themselves as having any advantages in the United States, they may not have realized that others do view them as advantaged. If a white doctor were to see a black patient and both parties were unaware of the spectrum of views and assumptions the other might hold, a constructive dialogue is less likely. It is arguable that the responsibility of ensuring that all involved are aware of the potential difficulties is greater for health care staff than for patients.

We received a great variety of responses when students were asked to define key terms. Eighty-seven of 95 respondents who offered definitions defined culture as a one-dimensional, static socially defined concept. Six students thought culture is a self-defined concept with potentially multiple layers. The responses indicated that students varied in their understanding of these terms. To us, students' definitions showed a great variability and misunderstanding of concepts related to culture and diversity which is perhaps unsurprising given the debates about the meanings of these terms. Although few students appeared to use patently biological definitions, very few seemed to have complex or multidimensional understanding that better reflected modern thought on this subject. This may suggest that the present curricula are in line with categorical teaching of cultural diversity and perhaps do not challenge students to examine their preconceptions. However, the responses suggest that students' understanding

about these issues needs to be challenged in educational programs.

Our results indicate that the first-year medical students in our study had an impression of ethnic groups existing as very discrete and well-defined groups. Students acknowledged different ethnic groups within the color white. However, color and the issues around race and perceptions of race remained a significant barrier to dialogue regarding diversity and seemed to cause greater concern than the issue of ethnicity. When discussing the categorical and cultural sensibility approaches, students were overwhelmingly in favor of the latter which suggests a disparity between this preference and the way they believed they viewed culture.

Focus-group students intimated the cultural sensibility approach was the one that they were drawn to when they were asked about the two models. However, the questionnaire responses indicated that conceptually students may have been more comfortable with culture as defined in the categorical approach. Before attempts are made to teach medical students about diversity, our study indicates that they would benefit from exploring their own perspectives and sense of belonging as well as exploring the concepts of culture, race, ethnicity and diversity. These exercises may help them identify their personal biases and the ways in which they understand their patients, which may ultimately influence their clinical practice. This may also help physicians realize that their patients are as complex as they themselves are. In addition, it is difficult to be clear how effectively the questionnaire identified which model best fit the students' conceptualizations. Medical students could also be more explicitly challenged on their understanding of "others" and questioned where this understanding has come from. Some students expressed some doubt on genuine faculty commitment to addressing diversity beyond a superficial level.

Our questionnaire clearly challenged many students. Although a minority clearly felt threatened and were of the opinion that issues related to cultural diversity are an attempt to placate political constituencies, most students appeared to favor teaching this subject. The fact that some students felt uncomfortable may indicate that the questionnaire itself served a teaching purpose by bringing conscious and subconscious biases to the surface, requiring students to reflect on fundamental issues related to diversity.

Conclusions

Our study found that medical students at this university were not familiar with key terms and often struggled with the issues that diversity raises. Although students held open attitudes toward equal opportunities and multiculturalism, differences between and within groups indicate that all students would benefit from self-reflection and diversity teaching. This would improve patient–doctor communication, which remains at the heart of good practice irrespective of the cultural background of the patient or doctor.

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