A Qualitative Study of New York Medical Student Views on Implicit Bias Instruction: Implications for Curriculum Development

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BACKGROUND: For at least the past two decades, medical educators have worked to improve patient communication and health care delivery to diverse patient populations; despite efforts, patients continue to report prejudice and bias during their clinical encounters. Targeted instruction in implicit bias recognition and management may promote the delivery of equitable care, but students at times resist this instruction. Little guidance exists to overcome this resistance and to engage students in implicit bias instruction; instruction over time could lead to eventual skill development that is necessary to mitigate the influence of implicit bias on clinical practice behaviors.

OBJECTIVE: To explore student perceptions of challenges and opportunities when participating in implicit bias instruction.

APPROACH: We conducted a qualitative study that involved 11 focus groups with medical students across each of the four class years to explore their perceptions of challenges and opportunities related to participating in such instruction. We analyzed transcripts for themes.

KEY RESULTS: Our analysis suggests a range of attitudes toward implicit bias instruction and identifies contextual factors that may influence these attitudes. The themes were (1) resistance; (2) shame; (3) the negative role of the hidden curriculum; and (4) structural barriers to student engagement. Students expressed resistance to implicit bias instruction; some of these attitudes are fueled from concerns of anticipated shame within the learning environment. Participants also indicated that student engagement in implicit bias instruction was influenced by the hidden curriculum and structural barriers.

CONCLUSIONS: These insights can inform future curriculum development efforts. Considerations related to instructional design and programmatic decision-making are highlighted. These considerations for implicit bias instruction may provide useful frameworks for educators looking for opportunities to minimize student resistance and maximize engagement in multi-session instruction in implicit bias recognition and management.

KEY WORDS: implicit bias; unconscious bias; medical education; health disparities; curriculum development.

INTRODUCTION

Medical students, like everyone, possess implicit biases.[1,2] Left unexamined, these biases and prejudices may lead to health disparities in their medical practice.[3–10] Well-designed implicit bias training with appropriate mitigation strategies could lead to a reduction in health disparities and improvements in patient/provider communication and medical decision-making.[10] Raising knowledge and awareness of implicit bias without instruction that leads to such skill development, however, can have negative consequences.[11] In our previous work, students expressed their desire to move beyond knowledge and recognition of implicit bias to skill development.[12] To date, most curricula on implicit biases involve one session.[13–19] In addition, extant explorations of learner reactions to implicit bias training suggest that a single session may not be adequate for learners to transition from resistance to acceptance of implicit bias.[15,16]

Educators seeking to design instruction leading to skill development are challenged by learner resistance.[15,16,18,20] Medical students may be resistant, even hostile, toward engaging in difficult and sometimes emotionally charged discussions on systemic and institutional racism, social determinants, and health inequities that often accompany teaching on racial and ethnic implicit bias.[20] There are often questions regarding the validity of the Implicit Association Test and its results.[15,16,18] Single sessions have demonstrated student resistance to growth in strategy development to address implicit bias in oneself: Resistance has been demonstrated as a reduction in humanistic strategies,[15] persistence of suppression strategies,[15] and maintenance of pre-existing beliefs about bias.[18]

In our explorations of faculty experiences with implicit bias instruction, some reported feeling overwhelmed by student resistance.[21]

There is scant evidence demonstrating the optimal methods by which to overcome student resistance to instruction, and how to keep students engaged in multiple sessions in order to maximize opportunities to achieve eventual skill development. Our study seeks to address this gap in knowledge. It is part of a comprehensive needs assessment,[22] exploring patient,[23] student, and faculty[21] perspectives of implicit bias undertaken prior to developing a longitudinal, skills-based curriculum in implicit bias recognition and management. Our needs assessment has identified potential targets for curricular interventions[23] and elucidated faculty experiences[21] with student resistance to implicit bias instruction. The results of our needs assessment, our experience delivering implicit bias instruction,[16, 17] and identified gaps in the literature led to this study. We explored medical student perceptions of challenges and opportunities in formal and informal instruction on racial and ethnic implicit bias recognition and management.

METHODS

We conducted an in-depth exploratory qualitative study using focus group interviews with first through fourth year medical students. We were asking students to discuss perceptions of existing and anticipated instruction in implicit bias. Therefore, we anticipated focus groups, rather than individual interviews, would yield richer insights based on our previous success using this format to explore student perceptions on anticipated instruction on health disparities.[12] Recruitment, data collection, and analysis were conducted iteratively to fully capture and explore variation in students' perspectives. All aspects of the study were approved by the Institutional Review Board of the Albert Einstein College of Medicine.

Interview Guide Development

Two investigators (CMG and PRM) created the interview guide through literature review and personal experiences with implicit bias instruction.[16, 17] We assumed there might be some resistance among our potential participants to implicit bias instruction. The guide began with a brief introduction by the facilitator (supplementary online Appendix). The introduction covered three areas: (1) the study's purpose to learn about students' perspectives on implicit bias and future potential instruction on the topic; (2) ground rules such as confidentiality; and (3) definitions and evidence related to implicit bias and its potential relevance to clinical care. The third portion reiterated to participants the concept of bias as articulated in the guide. We attempted to ensure a similar understanding of implicit bias and uniform use of terms regardless of prior instruction on the topic.

The open-ended questions elicited students' perspectives of implicit bias within oneself, in others, its relevance to clinical care (e.g., Do you think your implicit biases have the potential to impact your patient care?), and its role (if any) in medical education. Questions also explored perceptions of previous experiences with implicit bias instruction (What worked? What did not work?) as well as anticipated concerns/fears and preferences/opportunities if discussing implicit bias in an instructional setting. We use the race Implicit Association Test (IAT) as a tool to generate discussion in our existing curriculum, therefore incorporated questions specific to its use (e.g., anticipated or real feelings about results showing bias toward White and against Black people). Participants who had taken the IAT as part of the medical school curriculum or for any other reason were welcomed to comment on their experiences with it; participants did not take the IAT for the purposes of this study. Questions were reviewed by two medical students/ key informants for clarity (volunteers not part of the investigative team) and revised until all investigators reached agreement. Questions served as a starting point for the discussion, enabling pursuit of unanticipated lines of discussion and interaction among group members.

Setting and Recruitment

The study took place at a single institution in a large urban setting serving a racially and ethnically diverse patient population. At the time of the study, our curriculum had a couple of opportunities for students to be exposed to implicit bias instruction: One compulsory 90-min session occurred in the third year focused on racial implicit bias and its relation to health disparities,[16] as well as in implicit bias instruction within a first year health disparities elective.[17] Students who had participated in either or both of these opportunities were free to comment on their experiences.

We recruited first through fourth year medical student volunteers to explore the perspectives of our intended learners at each stage of medical school. We used flyers placed outside of classrooms during small group sessions for other courses. We supplemented our recruitment strategy using snowball sampling by asking for referrals of students whom participants anticipated might contribute divergent perspectives.[24] To enhance participants' ability to share honest perspectives, we strove to maximize homogeneity within focus groups (e.g., year of medical school, if referred for "divergent perspective," and racial/ethnic backgrounds when possible), while maximizing diversity of perspective across focus groups. Referred students were invited to participate by our research assistants.

Data Collection

We scheduled focus groups directly after small group classes. Two research assistants (MLD and EK), trained by the PI (CMG), facilitated the focus groups. We expected participants would feel more comfortable being candid, especially with negative/divergent opinions, with peers, rather than with a faculty facilitator (at the time, MLD had graduated college and was applying to medical school and EK was a medical student). We conducted focus groups on campus, provided

food, and entered participants into a raffle to win one of two $100 gift cards. Confidentiality safeguards were affirmed, and written informed consent was obtained from all participants.

Focus groups were continued until ongoing data analysis demonstrated we had reached saturation of themes, i.e., no further emergence of new concepts in subsequent focus groups.[25] Discussions were digitally recorded and professionally transcribed. Investigators cross-referenced the audio with the transcripts to confirm accuracy.

Analysis

We analyzed the content of discussion within focus groups in three phases.[26] In the first phase, two investigators (MLD and CMG) independently read two transcripts line-by-line to identify phrases relevant to student perspectives on implicit bias. They then discussed their notes and reached consensus on codes and their definitions to create the preliminary codebook. This codebook was independently applied to two more transcripts and further refined. Given the large number of transcripts, a third investigator (EK) joined the data analysis process. During the second phase, these three investigators used the codebook to independently open code the remaining transcripts (two for each transcript). They then discussed low inference codes and their meaning to develop conceptual themes. They subsequently met to discuss the relationships between themes and reach consensus on representative quotes. Once identified, these data were presented to select participants to ensure accurate representation of their perspectives, for member checking; this final process did not result in refinement of the codebook or of the conceptual themes.

RESULTS

We conducted 11 focus groups, each 60–90 min in length, with a total of 56 participants (between three to nine students in each group). Demographic data are listed in Table 1 and demonstrate the diversity of our participants. Our analysis identified four themes that describe the challenges and opportunities for attaining and retaining student engagement and progression in implicit bias recognition and management. The themes were (1) resistance; (2) shame; (3) the negative role of the hidden curriculum; and (4) structural barriers to student engagement.

Resistance

As in previous studies, some of our participants resisted the presence of bias within themselves, questioned the utility of the IAT, and doubted implicit bias influenced clinical outcomes. We are not reporting those results in this paper, in order to delve into previously unreported student perspectives on implicit bias instruction. Some resistance stemmed from participants' beliefs that interpersonal behaviors are already formed in young adults and could not be altered or taught. "I

Table 1 Demographic Data of Participants in Focus Group Study Exploring Students' Perceptions of Opportunities and Challenges in Participating in Implicit Bias Instruction at Albert Einstein College of Medicine 2014

Demographic data	N = 56
Medical year	
MS1	15 (26.8%)
MS2	15 (26.8%)
MS3	13 (23.2%)
MS4	9 (16%)
MSTP (MD/PhD)	3 (5.3%)
Unspecified	2 (3.6%)
Self-identified gender	
Female	27 (48%)
Male	29 (52%)
Age	
Mean	25 years
Range	21–33 years
Self-identified race/ethnicity	
Asian/Asian-American	22 (39.2%)
White/Caucasian	19 (34%)
Black/African-American	6 (10.7%)
Multi (including White/Jewish, Afro-Caribbean, Black/Hispanic, Native American/Hispanic)	7 (12.5%)
Other (Jewish, unsure)	2 (3.6%)
Place of birth	
USA	41 (73.2%)
Outside of the USA	15 (26.8%)
First language	
English	37 (66%)
Other	19 (34%)
Average mother's educational attainment*	4.21 equivalent to bachelor's
Average father's educational attainment*	4.78 equivalent to bachelor's
Undergraduate major	
Natural sciences	24 (43%)
Social sciences	14(25%)
Other	18 (32%)
Advanced degrees	
PhD	3 (5%)
Masters	7 (12.5%)
None	47 (83.9%)
Relatives in medical field	
Yes	32 (57%)
No	24 (43%)

Parental educational attainment was scored as 1, less than high school; 2, high school; 3, some college, 4, bachelor's degree; 5, master's degree; 6, doctoral degree

don't think it needs to be taught. Most people in their twenties have enough life experience to know intuitively how they should be acting." Other participants drew from experiences in other courses. "Implicit bias has similar problems as teaching ethics. Everyone knows what's right." "I feel like they [some classmates] are going, 'Listen, if I just focus my efforts into being a doctor, a good doctor, none of this will be relevant anyway.'" Students sometimes resist instruction through discounting its relevance to medical care, and therefore their education.[20] They may perceive that interpersonal behaviors and communication instruction are unnecessary because these topics are "common sense.[27, 28]"

Shame

Some participants indicated they would hesitate to divulge their implicit biases, as uncovered by their IAT results, in a group setting. They attributed their hesitancy to shame

associated with having bias and fear of revealing bias publicly, offending their classmates, or revealing bias toward a classmate. "It would be really uncomfortable to have classmates reveal biases against you according to your specific group. It might make learning alongside them awkward or difficult in the future." Participants feared potential far-reaching consequences should their word choices appear on social media. "In our age of… Twitter and YouTube, everything you say can be immortalized, and then if it's something you say wrong, you're going to be… dissected by everyone out there." Others mistrusted the safety and confidentiality within instructional encounters causing skepticism toward engaging fully and honestly with instruction. "There definitely needs to be an element of confidentiality because we're all going to be each other's colleagues. I don't want to be the neighborhood ophthalmologist who's the racist everyone remembers from med school." One strategy to counter these fears was to limit their conversation to what is socially acceptable. "People might be self-conscious about their opinions and don't want to sound politically incorrect. It could lead to people not expressing their real views, to faking it." This strategy might inhibit meaningful discussion and skill development.

To decrease shame, participants suggested recruiting senior students as facilitators in small group sessions. "Fourth years have this wealth of knowledge that we don't have yet, but at the same time, they still feel very relatable, and I don't feel scared." Another suggestion to decrease shame was encouraging facilitators to role model their personal experiences with bias and how they managed it. "Having people who you look up to say this exists [bias] and I do it too, would make it feel safer and less accusatory." They wanted to optimize the learning environment with "small groups," "ground rules," and group continuity over time. "It would be useful to stay with the same group the entire year, that way it is already a small group of people you are comfortable with."

The Negative Role of the Hidden Curriculum

Participants shared examples from the hidden curriculum and relayed how these influenced their perspectives about implicit bias instruction; examples included faculty role modeling biased behavior during lectures, small group sessions, and clinical experiences. "I feel that [bias] is often explicitly stated… Our facilitator this morning in case conference said, 'This is a typical Bronx patient.' That is something I've heard so many times and you learn to look for this profile and it's associated with a certain race." Such behavior could reinforce implicit bias as acceptable behavior in medical care and potentially justify learners' resistance to instruction.

Sometimes, participants were uncertain whether a physician was exhibiting biased behavior, or if it was just the way things done in clinical practice.

> On Mondays, I'm in the ER, and doctors are trying to make a diagnosis really quickly and put together all this

information, but what that does is, as a physician, you see people just placing everyone into categories and making assumptions so that they can reach the quickest possible conclusion. Without articulation by faculty of the clinical reasoning that goes into their decision-making, students simply perceive physicians making and acting on assumptions.

Students described encounters potentially influenced by implicit bias. "The worst feeling is hearing someone say something racist or biased and not feeling like you can tell them that wasn't okay… but it happens all the time… feeling trapped in that position is really tough." They expressed a desire to advocate for patients but felt powerless to do so with resident and attending supervisors, given the hierarchy and power dynamics of clinical teams.

Structural Barriers to Student Engagement

Participants identified structural barriers, including systemic and institutional level factors that could diminish student engagement with instruction. These barriers included diversity, competing priorities, and need for effective facilitation. They perceived the lack of diversity in the student body as a structural barrier to open and honest discussion about racial and ethnic implicit bias. "Our school isn't actually that racially diverse so I think it would be tough to be really open in a classroom." Participants also acknowledged the potential for students underrepresented in medicine (URM) to be perceived as representing their "group."

> I think it [discussing race] ends up making you the token in so many different ways. What you say has to represent what all Black people would say because it may be the first conversation they have had with a minority person. It puts you in an awkward position feeling like you could potentially be speaking for everyone, which I don't want because my views are mine. URM students often lack the critical mass in numbers within medical student classes; this may impact their willingness to speak up and fear being seen as "other" during discussions.[29]

Conversely, some participants recognized the privileged position of White persons in society. They expressed fear of being criticized and the difficulty of being the White student during discussions of race and ethnicity. "It is very hard to be a White male in this society because generally speaking there are expectations of how the various races treat one another, and I think the highest expectation is given to the White male." Student self-identified race may influence their perceptions of how others interpret their contributions to discussions. If these perceptions are negative, they may decrease open and honest engagement with the instruction, in ways that may differ between White and URM students.

Participants cited competing priorities from other coursework as a deterrent to actively participating in implicit bias instruction. "Tons of people are going to complain. They're going to be like, 'What the hell is this? I'm studying for a neuro exam right now. Why do I have to waste my time doing this?'" Participants anticipated student dismissal of implicit bias sessions that do not "count" toward their progression through medical school. "Having to talk about anything that is not on the boards…So it doesn't even matter if it goes into the curriculum if everyone treats it like, 'Whatever, it's not going to be on the test, and I'm not biased.'"

Participants recognized the dearth of formal facilitator training as a structural barrier, noting not everyone possesses the skills to properly facilitate small group discussions on implicit bias.

> Another plug for people having honest conversations about really hard things is—it does lead somewhere, as long as it's really well-facilitated. When it's not well-facilitated, it's triggering and horrible, and people have really bad feelings. So the facilitator can make or break those conversations.Participants explained that poor small group facilitation poses a barrier to student engagement when it stifles honest and open discussion.

DISCUSSION

Our study had three main findings. First, it expanded upon what is known about student resistance,[12, 15, 16, 18, 21] uncovering individual and structural barriers to student engagement in implicit bias instruction related to discounting of instruction, considerations of individual racial identity, and lack of diversity. Second, our analysis identified potential threats to student engagement including shame, along with opportunities to enhance engagement within the learning environment, and the need for formal facilitator training. Finally, our results highlighted how the hidden curriculum counters efforts educators make during formal instruction on implicit bias. In discussions involving race, it is important to meet students where they are.[20] Our participants' insights can guide efforts to "maximize learning and minimize backlash (p. 86)[30]" and serve as a framework to inform decision-making at instructional design and programmatic levels.

Instructional Design Considerations

Participants expressed resistance to engaging in implicit bias instruction by discounting it. Instructional designs can build on what is known about countering attitudes discounting instruction by creating a "critical incident" to move learners from unconscious incompetence to conscious incompetence.[27] This active learning strategy safely uncovers students' knowledge deficits and enhances the relevance of implicit bias to clinical practice behaviors, and therefore, their education. Other elements of instructional design that may enhance

engagement include approaching instruction on clinician bias as part of professionalism highlighting the potential for growth and improvement in clinical practice behaviors, and fostering a learning orientation (rather than a performance orientation) to interracial encounters.[31–33] These factors have demonstrated potential to increase the likelihood of unbiased medical decision-making by students and to facilitate learner benefits in health disparities instruction.[31, 32]

A safe and nonthreatening learning environment facilitates implicit bias instruction.[34] Our in-depth analysis of student perspectives can inform development of a safe learning environment in several ways. Educators can take steps to reduce the shame students anticipate feeling potentially related to ego-dystonic self-discovery.[35] If implicit bias is seen as a threat to students' identities as good people and future physicians who would do the right thing, efforts to remove the stigma associated with implicit bias, normalize the concept, and enhance the safety of the learning environment could attenuate those feelings and potentially decrease perceived pressure to provide socially acceptable answers.[36] Anticipated shame may decrease if students observe video encounters and debrief on behaviors of others (a vicarious experience[37]), prior to examining the influence of their own implicit biases. Training senior students to facilitate some instruction, as opposed to faculty, flattens the hierarchy (disables the power of rank) between facilitators and learners and may enhance junior students' comfort.

A safe and supportive learning environment may be fostered through an instructional design which accounts for participant concerns related to racial identity. Our findings suggest the need to specifically explore perspectives of both White and URM students when designing innovations in implicit bias instruction. When piloting innovations during curriculum development,[22] consideration should be given to recruiting a diverse group of medical student volunteers. Finally, integrating implicit bias instruction into instruction occurring within stable small groups or existing learning communities can capitalize on group cohesion to enhance the safety of the learning environment and build trust.[38, 39]

Incorporating participant perspectives into the instructional design could increase student engagement and potentially facilitate the progression of learners through the stages of conceptual framework proposed by Teal and colleagues.[30] Their framework moves learners through several stages: (1) *denial*—denial or lack of awareness of implicit bias, (2) *defense*—awareness of implicit bias but failure to accept its presence in oneself; (3) *minimization*—recognition of bias in others, and in oneself, but with a minimization of its impact on clinical interactions; and (4) *Acceptance*—acceptance of bias in general, in oneself, and its potential impact on clinical interactions. In their final two stages, (5) *adaptation* and (6) *integration*, learners acquire skills to reflect on previously unrecognized bias, and to recognize and manage implicit bias in themselves in order to mitigate its influence on clinical encounters.[30] A self-motivated learner may have the "ability

to see the potential impact (of implicit bias) on future interactions with patients (p. 86)[30]" after a single session, if they are able to progress to *acceptance*. Although the instructional design will influence learners' progression along the framework to *adaptation* and *integration*, having multiple sessions that allow for development and practice of skills related to these phases requires decision-making at the programmatic level.

Programmatic Decision-making Considerations

Our study revealed several opportunities for faculty involved in curriculum decisions affecting the entire undergraduate medical education program. According to our participants, prioritizing exams for other courses while valuing implicit bias instruction could create discomfort because their actions would not match their values. They also identified pitfalls to not assessing implicit bias instruction. Institutionally derived decisions such as making space in the compulsory curriculum for implicit bias instruction, timing the instruction relative to other coursework, and creating meaningful assessments could facilitate students prioritizing implicit bias instruction along with their competing demands. Incorporating this content into high stakes assessment (e.g., US Medical Licensing Exams) is another way to enhance its importance.[40]

Another aspect pervading medical education is the hidden curriculum. Informal instruction, through the hidden curriculum, encompasses the culture of an institution, interpersonal encounters, and what the students learn outside what they are taught through formal instruction.[41] Evidence highlights the influence of informal instruction on development of medical student perspectives related to implicit bias[33, 42, 43]; negative encounters within the hidden curriculum can worsen racial implicit bias.[43] Our participants reported negative examples from the hidden curriculum, which could be addressed in various ways. Faculty development programs should empower more faculty to debrief after an encounter and feel comfortable role modeling assumptions they have made.[44] Students have identified discomfort when unable to respond when faculty make disparaging remarks based on a patient's race or ethnicity[42]; those authors suggest providing skill-based instruction to address such situations and safeguards to protect students.[42] These efforts could help students feel safer asking questions about encounters potentially influenced by implicit bias,[45] and counter the detrimental influences of negative role models on professional identity formation.[46] In addition, fostering a diverse, inclusive environment may facilitate productive conversations about implicit bias.[44]

Limitations

Participants may have felt inhibited to express their views to the research team; however, we strove to mitigate the influence of reactivity on the part of participants by having trained research assistants (peers, not faculty) conduct the focus groups. Although we did seek to expand the views expressed through snowball sampling, participants were self-selected. Although focus groups allowed interaction between participants, our analysis was limited to the content of the discussion and not the interaction among group members. A final limitation is that most of our participants had not participated in longitudinal, multi-session, skills-based instruction; any perspectives on this format of instruction are based on what participants believe might be an issue in such sessions, and not based on issues that had actually emerged from these sessions.

CONCLUSION

Our study builds on previous research and expands on what is known about student resistance to concepts of implicit bias. The insights elucidated provide further in-depth details about learner needs, preferences, and perceived opportunities for instruction in racial and ethnic implicit bias. Our participants' insights have informed our instructional design and could inform curriculum development at other institutions. Our findings provide useful frameworks for educators seeking opportunities to minimize student resistance and maximize engagement in multi-session instruction in implicit bias recognition and management.

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Compliance with Ethical Standards:

All aspects of the study were approved by the Institutional Review Board of the Albert Einstein College of Medicine. Confidentiality safeguards were affirmed, and written informed consent was obtained from all participants.

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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