

How Diverse Is Your Universe? An Activity for Students to Reflect on Ethnoracial Diversity During Orientation

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Abstract

Introduction: Physicians' unconscious biases have been linked to health disparities within ethnic and racially diverse communities. Addressing these unconscious biases is difficult but may be ameliorated by raising individuals' awareness of the ethnoracial makeup of their personal and professional networks and reflecting on whether it needs to be expanded while in medical school. **Methods:** First- and second-year students were provided with an overview of the ethnoracial makeup of individuals within the state, community, and medical school as a means to reflect on the ethnoracial makeup of their future patient population. Following this overview, students engaged in an activity adapted from the University of Houston, which allowed them to visually represent the ethnoracial diversity within their networks. Written reflections on the adapted activity were collected, analyzed using manifest content analysis, and reported according to themes. **Results:** The results indicated that the activity was valuable in helping students visualize their current exposure to ethnographically diverse individuals (143 of 357 responses [40%]) and reflect on their need to expand the level of ethnoracial diversity in their lives (47 of 357 responses [13%]). Additionally, students provided comments to help improve the activity when used in another institution. **Discussion:** Assisting students in raising their awareness of the ethnoracial diversity in their personal and professional networks is a step toward addressing the unconscious biases that emerge in physicians while in clinical practice. This activity, designed to raise students' awareness of ethnoracial diversity, originated in Augusta, Georgia, but can be adapted to any state.

Keywords

Diversity, Diversity and Inclusion, Cultural Competency, Health Disparities

Educational Objectives

By the end of this activity, learners will be able to:

1. Reflect on their personal and professional networks for ethnoracial diversity.
2. Analyze their personal and professional networks and represent them using multicolored beads.
3. Evaluate whether their personal and professional networks include ethnoracial diversity.

Introduction

Recent research on physicians' unconscious biases has linked the proliferation of health disparities within the United States to physicians' unexamined thoughts on race

and ethnicity.¹ Specifically, biases have been shown to negatively affect patients' treatment plans along the lines of race, ethnicity, and socioeconomic status.^{2,3} Unconscious biases are often difficult to address because they lie below individuals' awareness, and many have developed as a result of social, political, and economic practices that have segregated communities from each other.⁴ The historical lack of meaningful interaction between many communities has provided limited opportunities for some groups to develop a shared understanding of the day-to-day activities and values that shape communities.⁵

The activity "How Diverse Is Your Universe?" forwards the idea that medical students can begin to address unconscious biases and health disparities by reflecting on their current personal and professional networks. In other professions that struggle with the consequences of unconscious bias, learners are encouraged to expand their personal and professional networks as a way to become more familiar with individuals who have a different ethnoracial background.⁶ Experience with racial diversity is linked to the likelihood that learners will interact with someone of a

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different ethnoracial makeup and engage in discussions of racial or ethnic issues.⁷

Furthermore, central to any intervention on unconscious bias is affording students opportunities to reflect on their own personal experiences.⁸⁻¹⁰ Reflection is key to addressing unconscious bias because it helps individuals develop awareness for thoughts that exist below their conscious thinking.¹¹ Although there are many well-designed published interventions targeting unconscious bias, most of them are too extensive to easily integrate into a curriculum. These interventions differ in duration, setting, and content^{12,13} but typically rely on curricular interventions such as discussion cases¹⁴ or lectures.¹⁵ Curricular change of even this small scale may not be feasible for all institutions.

Therefore, given the fact that cultural competency training is best implemented at the start of medical school,^{16,17} this resource was designed to augment the presentation institutions typically give to students during orientation. It was also designed to facilitate discussions about race and ethnicity in a nonthreatening way, thus avoiding student resistance to discussion of these issues.¹⁸⁻²⁰ Research indicates that facilitators need to be careful in helping individuals and not overwhelm them. The consequence is that individuals may try to reduce their discomfort by rejecting their biases.²¹

Drawing on domains I and VI in the AAMC's Cultural Competency Framework,²² students engage in reflection on the ethnoracial diversity within their personal and professional networks. Networks are analyzed because they are an important consideration in any individual's life and afford exposure to different social activities, patterns of participation, and perspectives on a variety of issues,⁵ all of which are important in clinical practice. Creating an awareness of students' exposure to ethnically and racially diverse individuals in their network provides a foundation for discussions on health disparities and social determinants of health.

Methods

To assist students in creating an awareness of the ethnoracial diversity in their networks, we created an activity for first- and second-year students that was presented in their student orientation. The activity began with a PowerPoint presentation given by the Associate Dean for Multicultural and Student Affairs, which started with an overview of Georgia's larger population, including the breakdown of various ethnic groups, persons in poverty, religious composition, and Georgia's leading causes of death and disability (Appendix A). This high-level presentation on

diversity provided an entry point into the ethnoracial diversity within the first- and second-year students' class and the surrounding community of Augusta, where the medical school was located. The statistics given in these areas was meant to provide a context for students to think about the ethnoracial diversity around them as future physicians.

We then facilitated an adapted activity that was originally written and published by the University of Houston ("How Diverse Is Your Universe?").²³ The activity was part of a larger electronic resource offered to faculty interested in raising their students' awareness of their exposure to ethnically and racially diverse individuals. The activity was chosen because it provided students with a visual representation of an aspect of life not commonly examined,²³ namely, the level of ethnoracial diversity in one's life.

To demonstrate the importance of being aware of one's exposure to ethnoracial diversity in medical school and introduce the hands-on activity, a female fourth-year African American student spoke briefly about her experiences, which consisted of patient and health care team encounters that were both positive and negative. For example, she shared how African American patients were elated to see her in the clinic because these patients had so few interactions with physicians of the same ethnicity/race. She also shared how an Asian classmate experienced microaggressions based on the stereotype that Asians are smart and highly capable. This 2-minute personal statement ended with a message on the importance for medical students to become aware of the ethnoracial makeup of individuals in their personal and professional networks as a means to prepare themselves to work with patients who come from different ethnoracial communities.

The activity (Appendix B) began by handing out small Ziploc sandwich bags that had been prepared ahead of time. Each bag contained a clear plastic cup, approximately 40 Perler beads of various colors, and a small strip of paper for later reflection. The colored Perler beads represented different races and ethnicities chosen based on the AAMC stratification used in its reports^{24,25}: purple for Asian; red for black or African American; green for Hispanic, Latino, or Spanish origin; orange for white; blue for multiple race/ethnicity; and pink for American Indian, Alaska Native, and Native Hawaiian.

On the projector, students were given the information about which bead color represented which race/ethnicity corresponding to the AAMC's categorization of races in its reports.^{24,25} Using the questions written in Appendix B, the

facilitator asked students to choose a bead that best represented the race/ethnicity of various fictional and real people in their lives. For example, students were asked to select a bead that “closely represents their race/ethnicity” or one that would complete statements such as “My neighbors at home on either side of my house/apartment are . . .” and “The person who I most admire or who has had the greatest impact on my life is . . .” As students were read each statement, they added their beads to the clear plastic cup in their Ziploc bag. Upon completion, the cup then served as a representation of the level of racial and ethnic diversity in their lives.

After engaging in the bead exercise, students were presented with a series of reflection questions (Appendix B) and were asked to turn to a student next to them, look at that student’s cup, and compare it to their own for similarities and differences. The fourth-year student asked if there were any surprises and whether the students were comfortable with the results. Students were then given 5 minutes to reflect with their partner and share any insights they had as a result of the exercise. Once this part of the activity was complete, students were asked to comment on the reflection prompt, the small strip of paper included in the Ziploc bag. This prompt was one of several copies cut from a sheet of paper (Appendix C) before the session. The prompt asked students to provide feedback on the activity: “Please write a brief reflection on your thoughts regarding this activity.”

Results

To provide context for this activity, in 2018, when it was implemented, African American and Latino students comprised 21% of first-year students and 23% of second-year students. When Asian students were included as an ethnoracial group, the percentage of Asian, African American, and Latino students was 52% for first-year students and 54% for second-year students. Even though there was some diversity within our medical school, the activity was designed to assist first- and second-year students to promote student reflection and discussion on ethnoracial diversity in a nonthreatening way. The activity was developed because although it is easy to tell students they need to expand their exposure to diverse individuals, it is more powerful when students come to this conclusion themselves. Therefore, our evaluation of this activity addresses level one of Kirkpatrick’s model of evaluation: students’ reactions.²⁶

Reflective responses were received from 184 out of 190 first-year students (96.8%) and 173 out of 190 second-year students (91.0%). After determining that the responses were similar across

both groups, they were grouped together and analyzed using manifest content analysis.²⁷ Content analysis is a qualitative research method designed to analyze large amounts of textual data. Manifest content analysis focuses on examining data for frequency counts in which the number of times a target (i.e., code) appears within the text is used as a way to understand its prevalence. In this instance, an educational researcher coded the dataset using codes that emerged in the analytical process. The data were then grouped by similar comments.

With the exception of three negative comments, the results of the content analysis were overwhelmingly positive. Of the total responses, 99.2% (377 of 380) indicated that students found the activity thought-provoking, interesting, and a creative way to begin discussions about race and ethnicity.

A Way to Discuss and Reflect on Diversity

Of the total responses, 152 of 380 students (40.0%) indicated that the activity was a good way to both discuss and reflect on the overall ethnoracial diversity within their state, surrounding community, and own lives. For example, the following comment represents those who wrote about the benefit of this activity: “I enjoyed this activity/felt like it was beneficial in demonstrating that our universe may not be representative of the populations we will be serving.”

The activity seemed to assist students in developing an awareness of the ethnoracial diversity in their lives, regardless of what ethnoracial community they represented. Selected quotes from first-year students demonstrate that both white and nonwhite students found the opportunity for reflection valuable:

- “The majority of the beads in my cup represented mostly a Black dominated circle as that which I’m closely associated with. As a physician, I’m going to meet and work with all kinds of people and medical school and this activity is a good way to begin diversifying my universe! Very, very neat activity!”
- “My cup was dominated with colors representing White individuals. Upon reflection, I think this is because I feel most comfortable with people that have similar life experiences. However, my life has always been enriched by people who are different from me, so I will seek to connect more with others.”
- “Split between Hispanic and White beads—which is like me, half Latin and half White—which I thought was interesting; made me want to expose myself to more Black and Asian culture/people!”

- “My universe is dominated mostly by Asians. As a daughter of Asian immigrants, I surrounded myself around other Asians because I felt more comfortable and relatable. I need to improve and expand my connections to be a well-rounded physician.”
- “Very thought-provoking to look at my beads to see that despite living in such a diverse state, I have very few meaningful relationships with those that are of different backgrounds.”

Second-year students also had similar insights on the need to expand their exposure to other ethnoracial groups. The following selection of student quotes demonstrates that the activity prompted students to reflect on their experiences in medical school and determine whether these were adequate for a future physician.

- “This past year, I have changed the makeup of my social circle for the better, getting to know people of different backgrounds more than ever. I will continue to do so moving forward.”
- “I have been able to associate with a more diverse group of people since I have started school at MCG (Medical College of Georgia). Otherwise, I would have had a more homogenous response.”
- “Due to the diversity of medical school, I have been able to interact with people of different backgrounds. However, my social life and hobbies are predominantly Asian, so I need to be more proactive in meeting more diverse people.”
- “The types of people I interact with has diversified since medical school, but also moved towards White and Asian. It’s important to understand the communities you are a part of.”
- “This was an interesting and eye-opening exercise. I think being a minority myself gave me better opportunities to connect with other POC (People of Color). I will continue to be open to all people no matter where I am.”

Making Visible Things That Are Hidden

Other comments demonstrated that the activity was a good way to visualize something that is “hidden” and “taken for granted,” such as how easy it is to interact with people who feel comfortable and are like-minded. In total, 125 of 380 students (32.8%) indicated that the activity helped them see how small their social circle was, represented by comments such as “I think this provided a good check on my current life. I have found that it is easy to get in a habit then lose awareness of things around me. This will help with that.”

Expanding One’s Network

Fifty of 380 students (13.1%) discovered a need to expand their personal and professional networks to include other races and ethnicities. Many were surprised by the racial and ethnic makeup of people they interacted with and indicated that they were committed to branching out and exposing themselves to new racial and ethnic groups. A typical response made by first-year students was “Very interesting activity—I did not realize how homogenous my world is. I will be striving to diversify while in medical school!” Second-year students frequently commented that their level of exposure to diverse individuals had expanded, although not to the level they would have liked.

Race-Neutral Activity

General comments were also made by 129 of 380 students (33.9%), who indicated that they liked the activity or thought it was creative. An example of this type of comment was “I appreciated the fact that there was no bias in the way the exercise was performed. It made it clear to me the lack of racial diversity in my life.”

Ways to Improve the Activity

Forty-two of 380 students (11.0%) provided constructive comments on how the activity could be improved. The majority of these comments included expanding the kinds of questions facilitators should ask in the activity, such as those involving favorite sports figures, a favorite physician at our medical school, role models from childhood, and roommates. These comments were often accompanied by the explanation that the questions asked in the reflection were too limited or not tailored enough to a medical student population. Students also suggested using candy instead of beads, suggesting Skittles or M&Ms. One student thought that the activity could be adjusted to save on preparation by having students “draw a circle for Caucasian, triangle for Hispanic, etc.” on a piece of paper and then reflect on the number of shapes in each category. Finally, others suggested more time for small-group discussion as an improvement.

Discussion

The activity offered in this resource was adapted from the University of Houston to meet our institution’s interest in having students develop an awareness of their personal and professional networks along the lines of ethnoracial diversity. We chose to focus on ethnoracial diversity because of the connection found in the literature between unconscious bias and health disparities. Therefore, we were primarily interested in supporting students in thinking about their networks and reflecting on their exposure to ethnically and racially diverse individuals.

The activity can be easily adapted by other institutions because it does not assume the student population has a specific ethnoracial makeup (high heterogeneity or high homogeneity). We chose to focus on race and ethnicity in our activity because, even in a racially and ethnically diverse institution, medical students do not necessarily reflect on the racial diversity around them or consider how their ethnoracial exposure could be used as a learning tool.²⁸ Our goal was to help students develop this awareness early in medical school.

We chose to focus on ethnoracial diversity; however, the activity could be further adapted by changing the slides in the PowerPoint and focusing on any number of other types of diversity in need of increased awareness (e.g., religious preference, socioeconomic status, sexual preference/gender), making the activity easily adaptable to different institutions' needs depending on their foci. Overall, students' response was overwhelmingly positive, with "thought-provoking" and "eye-opening" being the most common keywords used in the evaluation. However, after analyzing the full dataset, three responses from second-year students were negative and could provide some additional insight into ways the activity could be improved.

Two of the negative comments suggested that the students could not identify the goal of the exercise or what they were supposed to learn as a result of participating in the activity. Therefore, we suggest making it explicit that the goal of the activity is to raise awareness of students' ethnoracial network. We approached this goal from a more implicit standpoint, letting students make the connection. However, it was the third comment that helped us see what changes might be needed if the activity is repeated or transferred to another institution. This comment was a reminder of why medical schools offer cultural competency training and the importance of framing it for future physicians: "Insultingly simple bigoted propaganda that advocates diversity for diversity's sake. This is not appropriate. How will this 'help' us? This has never been explained. Please stop shoving diversity down our throats like we are 6 year olds."

If medical educators take the perspective that there is something to be learned about cultural competency training from that student, then perhaps it is this—facilitators of cultural competency training need to ensure they are communicating why it is important to have diversity training in medical school, why it is important to think about one's own and others ethnic and racial makeup, and what value this has in a physician's personal and professional development and clinical practice. This connection

needs to be made clearer for some students, if not all, so they see the practical value in engaging in these kinds of activities.

To this end, we would suggest implementing this exercise at both first- and second-year orientations, focusing on why it is important for students to be aware of their own and others' racial and ethnic makeup and how raising awareness of one's ethnoracial network will benefit students when they transition to clinical practice. Potential reasons facilitators can offer include that (a) having an ethnically and racially diverse network exposes individuals to different activities, patterns of participation, and perspectives, and (b) engaging with diverse individuals creates a sense of familiarity with other communities and their health-related needs.

We also suggest that facilitators implementing this activity ask questions more tailored to a medical school population. Some of the feedback we received indicated that the questions were too generic and did not reflect the students' experience, such as issues related to employment. It had not occurred to us that some of the students had not experienced being employed; thus, for several students, the question of employment was not relevant. For second-year students in particular, we suggest introducing the concept of intersectionality,²⁹ the idea that race, class, and gender overlap and intersect in ways that are important for physicians to consider as they treat individuals who represent various combinations of discrimination and/or privileged positions within society. First-year students may not be ready to discuss these ideas openly, but second-year students may be ready for a deeper dive into these issues.

Additionally, to ensure that discussions are rich, we suggest extending the session time by 10 minutes to allow for longer reflection and discussion in both the small and large groups. Deeper reflection could also be facilitated by having students switch cups with the person next to them, compare the level of heterogeneity in each cup, and discuss the ethnoracial makeup represented in the beads. We would also suggest moving beyond Kirkpatrick's first level of evaluation²⁶ and potentially investigating whether raising awareness on the first day of medical school influences students later in their development of personal and professional networks. Finally, although this activity is useful at orientation to begin the conversation around race and ethnicity, it should be framed as just an opening activity for larger conversations. One of the limitations of this activity is that we focused on raising awareness as a first step, but follow-up activities and sessions should be developed throughout the year to expand students' exposure to conversations on cultural competency, health disparities, and social determinants of health.

Appendices

- A. Diversity Orientation.pptx
- B. Diversity Activity Instructions.docx
- C. Diversity Student Reflections.docx

All appendices are peer reviewed as integral parts of the Original Publication.

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