

Medical Students' Perceptions of Their Teachers' and Their Own Cultural Competency: Implications for Education

Britta M. Thompson, PhD, MS¹, Paul Haidet, MD, MPH², Robert Casanova, MD³, Rey P. Vivo, MD³, Arthur G. Gomez, MD⁴, Arleen F. Brown, MD, PhD⁴, Regina A. Richter, MA⁵, and Sonia J. Crandall, PhD, MS⁶

¹The University of Oklahoma College of Medicine, Oklahoma City, OK, USA; ²The Pennsylvania State University College of Medicine, Hershey, USA; ³Texas Tech University Health Sciences Center School of Medicine, Lubbock, USA; ⁴David Geffen School of Medicine at UCLA, Los Angeles, USA; ⁵UCLA Graduate School of Education and Information Studies, Los Angeles, USA; ⁶Wake Forest University School of Medicine, Winston-Salem, USA.

BACKGROUND: Enhancing the cultural competency of students is emerging as a key issue in medical education; however, students may perceive that they are more able to function within cross-cultural situations than their teachers, reducing the effectiveness of cultural competency educational efforts.

OBJECTIVE: The purpose of our study was to compare medical students' perceptions of their residents, attendings, and their own cultural competency.

DESIGN: Cross-sectional study.

MAIN MEASURES: A questionnaire containing previously validated instruments was administered to end-of-third-year medical students at four institutions throughout the US. Repeated measures multivariate analysis was used to determine differences in student ratings.

PARTICIPANTS: Three hundred fifty-eight medical students from four schools participated, for an overall response rate of 65%.

RESULTS: Analysis indicated overall statistically significant differences in students' ratings ($p < 0.001$, $\eta^2 = 0.33$). Students rated their own cultural competency as statistically significantly higher than their residents, but similar to their attendings. For reference, students rated the patient care competency of themselves, their residents, and their attendings; they rated their attendings' skills as statistically significantly higher than residents, and residents as statistically significantly higher than themselves. There were differences between cultural competency and patient care ratings.

CONCLUSIONS: Our results indicate that students perceive the cultural competency of their attendings and residents to be the same or lower than themselves. These findings indicate that this is an important area for future research and curricular reform, considering the vital role that attendings and residents play in the education of medical students.

KEY WORDS: cultural competency; medical education; medical education-undergraduate.

J Gen Intern Med 25(Suppl 2):91-4
DOI: 10.1007/s11606-009-1245-9
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BACKGROUND

Improving the cultural competency of physicians has been proposed as an important strategy to help mitigate health care disparities, and is a priority area for both graduate and undergraduate medical education.¹⁻³ Over the past decade, many educational interventions have led to the creation of innovative materials and curricula intended to foster culturally competent behaviors among students and residents.⁴⁻⁶ However, despite such innovations, teaching and reinforcing cultural competency behaviors in clinical settings remain challenging.⁷⁻¹⁰ Murray-Garcia and Garcia¹⁰ suggest that informal messages about cultural competency experienced by medical students working in clinical contexts can be much different than what is written into the formal curriculum. What is implicitly learned within these clinical contexts has been referred to as the 'hidden curriculum.'¹¹ While researchers have begun to study this 'hidden curriculum,' little has been documented about students' perceptions of their clinical teachers' cultural competency within the clinical setting. Students' perceptions of the cultural competency of their teachers could reduce the effectiveness of even the best cultural competency curricula. Therefore, the purpose of our study was to measure medical students' perceptions of their cultural competency compared to their perceptions of the cultural competency of their attendings and their residents.

METHODS

Instruments

After conducting an extensive review of the cultural competency literature for validated instruments that could be used to measure cultural competency attitudes and skills, we chose to use the Multicultural Assessment Questionnaire (MAQ).^{12,13} We used the skill (six items) and attitude (four items) subscales to measure students' perceptions of their residents, their attendings, and their own cultural competency using a

five-point scale (1= very poor to 5= very good). This questionnaire has been used in medical education settings and has evidence of validity.^{12,13} Representative items included “*Effectively working with interpreters*” and “*Negotiating diagnostic and therapeutic approaches in a culturally sensitive manner.*” For reference, we asked students to rate their own, their residents, and their attendings’ biomedical patient care competency using items from a previously validated questionnaire.¹⁴ Representative items included, “*Performing a comprehensive and focused biomedical history and physical exam*” and “*Accurately interpreting physical findings.*” We collected demographic information that included age, gender, race/ethnicity, languages (native, primary, and languages students were comfortable communicating with patients), number of generations students’ families had lived in the US, and specialty of interest.

Participants

We administered the questionnaire during April-June 2009 via paper and pencil or electronically to all third-year medical students at four medical schools (Wake Forest University School of Medicine, Baylor College of Medicine, Texas Tech University Health Sciences Center School of Medicine, and the David Geffen School of Medicine at UCLA). These medical schools are members of the National Consortium for Multicultural Education for Health Professions, a consortium comprised of 18 medical schools with an aim of increasing the knowledge, attitudes, and skills of medical students, residents, and practicing health professionals regarding factors that contribute to health disparities, and improving culturally competent health care delivery. The four schools in this study represented a diversity of geographic regions, public/private institutions, and class size. IRB approval was obtained at each institution.

Data Analyses

We calculated Cronbach’s alpha to examine the internal consistency of each instrument. We dichotomized the options for some demographic variables: underrepresented minority (American Indian, Black/African American, White/Hispanic), native language (English or other languages), primary language spoken at home (English or other languages), specialty of interest (primary care specialties or other specialties), and generations (grandparents, parents, and student born in US or one or more of the aforementioned born in another country). We used repeated measures multivariate analysis to test overall differences between students’ ratings of their own, their residents’, and their attendings’ cultural competency and patient care competency and also determined differences, if any, between schools and dichotomized variables (gender, race/ethnicity, and generations) based on previous studies, eliminating variables that were highly correlated. We set our alpha at 0.05 and calculated effect size, or practical/educational significance, using eta squared (η^2) to determine educationally significant differences. Eta squared measures the proportion of variance that can be accounted for or explained. Following published recommendations, we set practical/educational significance at ($\eta^2 \geq 0.16$).¹⁵ We conducted post-hoc ANOVAs using the Bonferroni correction to control type I error. We used SPSS 17.0 to conduct our analyses.

RESULTS

Overall, 358 third year medical students completed the questionnaire, for a response rate of 65%. The response rate at each school ranged from 50% to 86%. About half the respondents reported being female (51.4%). About half were White (48.3%), with 24%, 9.8%, and 5.0% reporting being Asian, White/Hispanic, and Black/African American, respectively. The remaining indicated being multiracial or another race, or chose not to answer. The gender and race/ethnicity of the respondents from each school were not statistically significantly different from the overall student body of the participating medical schools. About three-fourths (78.2%) indicated that English was their native language; all students noted that they could competently communicate with patients in English. While about half (46.9%) of the students reported that three generations of their family (themselves, parents, and grandparents) had been born in the US, 48.6% reported that at least one of their parents had not been born in the US. When asked to indicate specialty of interest, only 18.4% indicated an interest in a primary care specialty (general internal medicine, general pediatrics, family medicine, medicine/pediatrics).

We analyzed the internal consistency reliability for all instrument scales. Cronbach’s alpha ranged from 0.87–0.94 for students’ ratings of themselves, their residents, and their attendings cultural competency and patient care competency.

Our overall multivariate analysis was significant ($p < 0.001$, $\eta^2 = 0.33$). Analysis comparing students’ cultural competency and patient care competency ratings of themselves, their residents, and their attendings was statistically and practically/educationally significant ($p < 0.001$, $\eta^2 = 0.25$). Students’ average rating of their own cultural competency on the ten items was 3.91 (CI=3.85–3.96) out of 5 points, similar to their ratings of their attendings ($M = 3.92$, CI=3.84–3.99), whereas their ratings of residents was statistically significantly lower ($M = 3.59$, CI=3.51–3.66, $p < 0.001$, Fig. 1). Students’ ratings of their teachers’ patient care competency was different. Students rated attendings as statistically significantly more competent than themselves and their residents ($M = 4.76$, CI=4.72–4.80, $p < 0.001$), and they rated their residents as statistically significantly more competent than themselves ($M = 4.36$,

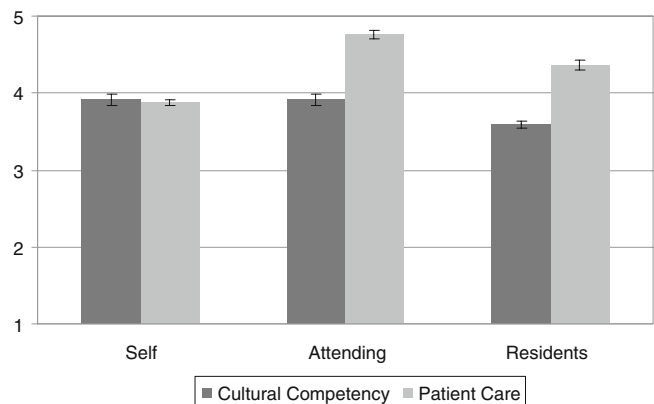


Figure 1. Students’ ratings of their residents’, attendings’, and their own cultural and patient care competencies (n=358). The rating scale was 1= very poor to 5= very good. Error bars represent confidence intervals

CI=4.30–4.42, $p < 0.001$). Students rated themselves as the least competent in this area ($M = 3.88$, $CI = 3.82\text{--}3.95$, Fig. 1). We noted statistically significant differences ($p < 0.001$) between students' perceptions of the cultural competency versus the patient care competency of their residents and attendings. We also found statistically significant main effects for school ($p = 0.01$, $\eta^2 = 0.04$) and statistically significant interactions between ratings and dichotomized race/ethnicity ($p = 0.002$, $\eta^2 = 0.01$), generations ($p = 0.015$, $\eta^2 = 0.01$), and schools ($p < 0.001$, $\eta^2 = 0.02$). As noted, effect size analysis indicated these were of little practical/educational significance, accounting for only 1–4% of the variance.

DISCUSSION

The results of our study indicate that medical students perceive their own cultural competency skills to be equal to those of their attendings and better than those of the residents who teach them. Our results also indicate that traits such as race/ethnicity, gender, and other demographic characteristics have limited influence on students' overall ratings. These results suggest that students may already be culturally competent when they enter the clinics, perhaps through formal cultural competency education. Recent efforts by medical schools, funding agencies, and new requirements set forth by governing bodies ensure that students have opportunities to enhance their cultural competency.² While these efforts may substantially improve the cultural competency of students compared to their residents or attendings, we propose that this does not fully explain our data, given that we found similar results in an earlier pilot study we conducted with two of the schools before the schools had implemented formalized cultural competency curricula.¹⁶ Additional studies involving schools with and without a formalized cultural competency curriculum should be conducted.

A second hypothesis is that gaps between students' own cultural competency ratings and their ratings of residents may be due to deficits between what is explicitly taught and what is informally experienced by students within the clinical context.¹⁰ Perhaps cultural competency is being formally taught in the curriculum but is not being modeled in the 'informal' curriculum, part of the 'hidden curriculum.' This raises concerns for those who believe that important skills may be "unlearned" by students in the clinical years.¹¹ Student exposure to residents who exhibit limited cultural competency, yet exhibit competency in other areas such as biomedical patient care, may reinforce the notion that cultural competency skills are less important. The influence of the 'hidden curriculum' on student perceptions of the competency of their clinical teachers should continue to be explored.

Our results may be reflective of students' limited ability to self-assess their own cultural competency. Students may perceive their own cultural competency as higher than it actually is. Our own work in part supports this hypothesis,¹⁷ indicating that students may not recognize or have effective strategies to manage their own biases. Additional research should be conducted to determine if students can (or cannot) recognize and take into account their own biases when providing patient care. Additionally, it would be informative to conduct this same study with residents and attendings to determine clinical teachers' self-assessment of their own

cultural competency compared with medical students and each other.

Additionally, our results may be indicative of the new millennial generation of medical students. Millennial students are purportedly interested in addressing social problems and in helping others; however, they may view discrimination, racism, and diversity as less of an issue than generations before them.¹⁸ It is difficult to determine how much, if any, influence this factor may have had in students' perceptions, especially given the fact that students rated their residents, who were only a few years older, as significantly less culturally competent than themselves.

Lastly, our results may be reflective of the fact that medical students tend to spend more time with residents than with attendings in the clinical setting. Therefore, lower resident ratings may in fact be a proxy measure of the greater teaching exposure that students have to residents. Future research should explore this aspect more fully.

LIMITATIONS

While our results are representative of a diverse student body from different geographic areas, they may not be generalizable to all medical schools. While representative of the diversity of the participating schools, these data represent the perceptions of end-of-third-year medical students who chose to complete the questionnaire from four schools participating in the National Consortium for Multicultural Education.

CONCLUSIONS

In conclusion, our results suggest that students view their own cultural competency as equal to or greater than that of their clinical teachers. While great strides are being made in the content and educational processes of cultural competency curricula, the effectiveness of such curricula may be mitigated by students' perceptions of the skills of their teachers and their own skills.¹⁹ Future research should further explore students' perceptions of their teachers' cultural competency and develop "best practices" for teaching this important area. Given the importance of cultural competency in reducing health disparities, our results suggest the importance of developing and implementing cultural competency curriculum aimed at teaching residents as well as attendings.

Acknowledgments: Supported in part by grants from the Southern Group on Educational Affairs (SGEA-AAMC) and K07 Cultural Competence and Health Disparities Academic Awards from the National Heart, Lung, and Blood Institute. The authors would like to thank Rachel Shada and Dr. Cayla Teal for their contributions to the design of the questionnaire.

The opinions contained herein are those of the authors and do not necessarily represent the views of the National Heart, Lung, and Blood Institute or the home institutions of the authors.

Conflict of Interest: The authors report no conflicts of interest.

Corresponding Author: Britta M. Thompson, PhD, MS; The University of Oklahoma College of Medicine, 941 Stanton L. Young Boulevard, BSEB 115A, Oklahoma City, OK 73104, USA (e-mail: Britta-Thompson@ouhsc.edu).

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