

Perceived Cultural Competence Levels in Undergraduate Athletic Training Students

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Context: As the patient population continues to diversify, it is essential that athletic training students (ATs) are educated to provide culturally competent care. This high-quality health care within the context of a patient's race, ethnicity, language, religious beliefs, or behaviors is a foundation of professional practice.

Objective: Determine undergraduate ATs' levels of cultural competence and their variability by gender, race, and year in school.

Design: Cross-sectional design.

Setting: Commission on Accreditation of Athletic Training Education–accredited undergraduate athletic training programs.

Patients or Other Participants: ATs enrolled in their programs' professional-education phase ($N = 421$), of which 366 were Caucasian and 55 were students of color.

Intervention: Students completed a 20-question online Likert survey using Qualtrics. Items were based on prior research and a nursing measurement tool, rated on a 1 to 4 scale (from *strongly disagree* to *strongly agree*, respectively; maximum score of 80), and found to be reliable (Cronbach $\alpha = 0.721$).

Main Outcome Measurements: Overall cultural competence score, means, and standard deviations were calculated for all students by gender, race/ethnicity, and year. One-way analyses of variance also compared each category.

Results: Higher scores on the research tool demonstrate higher levels of cultural competence. There were no significant differences found between gender and year in school. Students of color showed higher overall cultural competence scores than Caucasians ($F_{1,420} = 29.509$, $P < .01$). The mean overall cultural competence score was 58.36 ± 5.26 .

Conclusions: Students of color demonstrated higher levels of cultural competence, which is possibly because of their personal history and experiences. The current study demonstrates that athletic training programs must seek to better educate students on providing culturally competent care.

Key Words: Multiculturalism, diversity, professional practice

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INTRODUCTION

As the US population continues to diversify, the relationship between cultural awareness and health care quality has become a point of emphasis for all medical fields.^{1,2} Researchers have attempted to understand this relationship by investigating the influence of patient and practitioner diversity on the quality of health care provided. These studies have shown that a diverse practitioner population improves health care in 4 ways: higher cultural competence, increased access for minority and low-income patients, a stronger research agenda that focuses on minority health issues, and better overall health care system management.¹⁻⁴ To achieve these benefits, it has been recommended that practitioner diversity match the overall patient population. Currently most, if not all, health care professions do not meet these recommendations.¹⁻⁹ This divide is likely to continue: the US Census Bureau¹⁰ estimates that the US population in 2050 will consist of approximately 50% those identifying themselves as individuals of color, whereas less than 10% of health care providers identify themselves as individuals of color.¹¹ Athletic trainers provide care to an extremely diverse patient population, but only 12.25% identify themselves as an individual of color.¹² Many fields, including athletic training, have made increasing diversity a point of emphasis, especially at the student level.^{2,4,5,8,9}

Although the most common recommendation to increase the quality of care provided to patients who are a racial or ethnic minority has been to increase health care provider diversity, it takes considerable time to prepare these new practitioners for practice, and a common concern is what can be done in the interim to educate both current practitioners and nonminority students in educational programs.^{13,14} The answer has been to incorporate a cultural competence component into health care curricula to ensure that providers, regardless of race/ethnicity, are sensitive to and well versed in the cultural issues associated with caring for individuals from underrepresented groups.^{1,13} Researchers have provided many different variations of the definition of cultural competence, but all agree that it is an ongoing process in which individuals gain knowledge, experience, and comfort in dealing with patients who are different from themselves.^{11,13,15-22}

Currently, the majority of research on cultural competence is being performed with physicians and nurses.²³ Results of these studies have provided interesting information on current perceptions of cultural competence. Overall, nurses and physicians do not feel that they are adequately prepared to provide culturally competent care because they lack specific knowledge.^{16,21} This leads to anxiety and uneasiness when providing care, which will decrease the quality of care provided.^{3,16,18} Pacquiao¹⁹ researched the differences between patient and practitioner perceptions of cultural competence and found that patients emphasized a need for providers to have an understanding of their beliefs and language, while providers emphasized knowledge and cultural sensitivity.

When looking at specific perceptions of cultural competence, students and practitioners who identify themselves as an individual of color rate themselves higher than white students because of their life experiences.²⁴ This is not unexpected, as these individuals have experienced the difficulties minority patients undergo while trying to obtain quality health care. Fitzgerald et al²⁴ discussed their concern with these perceptions of higher levels of cultural competence, arguing that the students' self-scoring may inflate findings, because they may understand the issues related to their own race, ethnicity, or culture but still lack an understanding of issues associated with other races/ethnicities.

Within the athletic training field, there has been minimal research on cultural competence either in the field or in the classroom.^{23,25} For example, Geisler⁵ states that athletic trainers need to be able to deal with all patients within a global context from both technical and social aspects, while Marra et al²⁵ suggest that athletic trainers have high levels of perceived cultural competence but lack the ability to deliver appropriate care. Since the majority of athletic trainers are Caucasian and work with a high minority population, it is essential to find ways to educate students in a culturally competent manner to allow them to feel comfortable working with individuals of all backgrounds. This study sought to determine the perceived level of cultural competence of athletic training students (ATs) and the influence of race/ethnicity, gender, and year in school on a student's perceived ability to provide culturally competent care.

METHODS

Participants

Participants were undergraduate students enrolled in the professional phase of an accredited undergraduate athletic training program (ATP) during 1 month of the spring 2011 semester. An institutional review board approved this study, and each participant signed an electronic informed consent.

Procedures

Program directors (PDs) from the 344 undergraduate Commission on Accreditation of Athletic Training Education-accredited ATPs located in the United States were solicited for participation.²⁶ The 344 programs were the entire population of undergraduate accredited programs as of October 27, 2010. The author sent these PDs an e-mail detailing the study purpose and methods and asked them to distribute the survey link to all students enrolled in their professional programs. Follow-up e-mails were sent each week for 3 weeks as a reminder to participate. Surveys were administered by Qualtrics Inc (Provo, UT), a Web-based survey-distribution service. Survey data were analyzed with SPSS (version 18.0 (PASW Inc, Chicago, IL).

Table 1. Distribution of Participants With Means and Standard Deviations

Group	n	Mean \pm SD
Race/ethnicity		
Caucasian	366	57.80 \pm 4.98
Students of color	55	61.84 \pm 5.57
Gender		
Male	138	58.21 \pm 5.57
Female	238	58.43 \pm 5.11
Year in school		
Freshman	16	59.63 \pm 4.24
Sophomore	81	58.46 \pm 6.63
Junior	171	57.66 \pm 4.45
Senior	153	58.95 \pm 5.40

Instrumentation

A 20-item, Likert-scaled questionnaire based on the Inventory for Assessing the Process of Cultural Competence (IAPCC) was created to assess students' perceived level of cultural competence. They were asked to rate statements on a scale of 1 to 4 based on their level of agreement, where 1 represented *strongly disagree* and 4 represented *strongly agree*.^{17,24,27–29} Raw scores were calculated and then categorized to determine if a student was culturally incompetent (20–44), aware (45–63), competent (64–74), or proficient (75–80). The cumulative score, not the category, was the dependent variable used for analysis. The reference tool, the IAPCC,²⁸ has been found to be a reliable and valid method of determining cultural competence, with a Cronbach $\alpha = 0.783$.²⁴ The current survey demonstrated a Cronbach α of 0.721. A factor analysis failed to identify statistically significant subsets of questions from the survey.

Analysis

Data from the student instruments were analyzed using SPSS 18.0. Means and standard deviations were calculated for overall cultural competence score (out of 80) for all students, genders, races/ethnicities, and year in school. Three 1-way analyses of variance explored group differences in cultural competence score by race/ethnicity, gender, and year in school. Significance was set at $\alpha = .05$.

RESULTS

In total, 421 students from 62 programs and 31 states completed the survey (Table 1). Also included in Table 1 are the means and standard deviations determined for the overall score, broken down by gender, race/ethnicity, and year in school. Table 2 represents the score distribution across the 4 cultural competence categories. Although gender ($F_{1,420} = 1.988$, $P = .115$) and year in school ($F_{3,418} = 0.161$, $P = .668$) did not influence a student's perceived level of cultural competence, race/ethnicity demonstrated a statistically significant difference, with students of color having a higher level of perceived cultural competence ($F_{1,420} = 29.509$, $P < .001$) than Caucasians.

DISCUSSION

Athletic training, like other areas of health care, lacks diversity among its professional ranks, which may decrease

Table 2. Cultural Competence Score Category Distribution

Category	Percentage
Cultural incompetent (20–44)	0.2
Culturally aware (45–63)	83.7
Culturally competent (64–74)	15.4
Culturally proficient (75–80)	0.7

the quality of patient care, especially patients from a racial/ethnic minority.^{1,4,5,8,9} Though the overall goal is to increase the number of minority health care providers, it is also important that health care education programs include culturally competent education within their curricula. Currently, the National Athletic Trainers Association states that cultural competence is a foundational professional behavior²⁶ and requires all ATPs to demonstrate that students are being educated and evaluated on cultural competence.

Overall Level of Cultural Competence

This study found that students currently enrolled in the professional phase of their ATP lacked cultural competence. According to the survey results, students were aware that there are cultural differences but were not adequately prepared to provide culturally appropriate treatments. Previous research on athletic trainers' cultural competence is scarce, but Marra et al²⁵ found similar results, with certified athletic trainers (ATs) having demonstrated low levels of cultural competence but high levels of sensitivity to cultural differences. Individuals recognized that there were culturally specific differences that should be considered when dealing with a diverse patient population, yet they lacked the skills and ability to provide this culturally appropriate care. Two studies^{24,30} using the IAPCC identified the level of cultural competence in nursing students as similar to that found in the ATs in this study. Although this study's findings were slightly lower than those found in the nursing literature, the current students were identified as culturally aware ($\bar{x} = 59.79$, $SD = 5.62$) compared to nurses, who were culturally competent or culturally proficient.²⁴ Sargent et al³⁰ also found that senior-level nursing students were culturally aware ($\bar{x} = 54.75$, $SD = 4.398$). Wilson et al²² take this lack of cultural competence a step further and state that students in nursing are aware of the cultural difference in patients and care but lack the cultural competence to provide the appropriate care. These scores demonstrate that though there has been an increased effort in cultural competence education, students in both nursing and athletic training still lack the ability to provide culturally competent care.^{22,24,30}

This lack of cultural competence may relate to both education quality and the lack of opportunities to provide culturally competent care. Although educational programs are required to demonstrate cultural competence throughout their curriculum, specific guidelines, competencies, and instructional methods are lacking. Additionally, there may be a disconnect between classroom instruction and clinical experiences in cultural competence education.^{28,31–34} For students to learn the appropriate behaviors, clinical instructors must model these culturally appropriate behaviors and require that they be demonstrated.^{18,35,36} In addition to the clinical instructors providing proper mentoring, students should also have

multiple opportunities to apply their knowledge and hone their skills.^{27,28} Since many students may not have the opportunity to provide culturally competent care to individuals outside of the collegiate athletic setting, it is important that ATPs continue to explore methods of educating students in cultural competence, encourage clinical instructors to mentor culturally competent behaviors, and seek out a wide variety of opportunities for students to practice providing culturally competent care.

Race/Ethnicity and Cultural Competence

One's race/ethnicity has major implications for one's knowledge of their own culture. Undergraduate students of color demonstrated higher levels of cultural competence when compared to Caucasian students in this study. This result follows similar trends in previous research with ATs.²⁵ Within athletic training, individuals who identified themselves as multiracial or black/African American were found to have the highest levels of cultural competence, individuals who identified themselves as American Indian/Alaska Native had the lowest levels, and Caucasians were found in the middle range of scores.²⁵ Nursing research has also demonstrated that, in general, students of color have higher levels of cultural competence.³⁰ Students from minority backgrounds may have had more exposure to and experiences with diverse cultures, which in turn may have led to greater appreciation of diversity. Minority students also tend to openly engage in self-reflection about their own knowledge and experiences, which leads to increased cultural competence.²⁴ It is important to note that while minority students may have higher perceived levels of cultural competence, these inflated perceptions may result from experiences only within their own race/ethnicity versus a wide variety of ethnicities. Fitzgerald et al²⁴ found that students of color had inflated perceptions when compared with their IAPCC measures. This is an important factor for educators to recognize. Even though our students of color had higher levels of cultural competence, these levels may not accurately reflect a student's ability to provide culturally competent care to individuals from backgrounds other than their own.

Gender and Cultural Competence

Gender was not a mitigating factor in the students' ability to provide culturally competent care. Literature searches in both athletic training and nursing revealed very few studies that addressed gender's influence on cultural competence.^{25,37} In nursing, this may be due to the high disparity in the number of male versus female nurses. In the 2 studies that did investigate the relationship between cultural competence and gender, both found that gender did influence an individual's ability to provide appropriate care.^{25,37} Marra et al²⁵ found that females had significantly higher levels of cultural competence than male ATs and attributed this difference to females being more likely to have had diversity training and a history of negative experiences with diversity.

Year in School and Cultural Competence

It was hypothesized that students' cultural competence would improve as they matriculated through an ATP; however, the findings suggest that students' levels are both low and stagnant throughout the curriculum, with no significant

differences in cultural competence between student levels. Surprisingly, while not significant, seniors (58.95 ± 5.40) and juniors (57.66 ± 4.45) demonstrated lower cultural competence levels than did freshmen (59.63 ± 4.24). These results were similar to the findings for ATs, where years of experience were found to have no influence on an individual's cultural competence level.²⁵ This lack of transformation may be due to unchanging patient populations and exposures throughout a curriculum. The clinical experiences of ATs are predominantly in the collegiate setting, which may have a racially/ethnically diverse patient population^{5,12} but may not accurately reflect the nation's diversity. These findings and the Marra et al²⁵ findings were the opposite of nursing research and theories,^{22,30,38,39} which for the most part state that cultural competence is a transformative process, with levels increasing with experience and increased knowledge.^{18,28} Four nursing studies^{22,30,38,39} demonstrated that cultural competence levels improved over time. Yearwood et al³⁹ state that younger students may have decreased cultural competence levels due to their lack of experience with patients and diversity, and that as students matriculate through a program, their exposure to ethnically diverse patients increases. Although the collegiate setting is the most common clinical-experience site, ATPs should seek out other opportunities for students to have diverse patient exposure to help foster the growth and development of cultural competence.

Limitations and Suggestions for Future Research

Limitations did exist within this study. The instrument used was modified from a nursing instrument, so the questions may have not been as applicable to athletic training as a discipline-specific instrument. The nature of the instrument was also quite personal, and although the results were anonymous, students may not have honestly represented their lack of skills and knowledge. This study was also a one-time snapshot that may not accurately reflect the changes across matriculation that a longitudinal study of the same cohort would. Finally, the number of students who took the study was low ($N = 421$), which may limit generalization of the results. Future research should seek to identify an athletic training-specific cultural competence measure that would explore how discipline-specific characteristics influence cultural competence. This could be a self-reported measure or a method of observing cultural competence in practice. Once created, this athletic training-specific cultural competence measure could survey a larger student population.

CONCLUSIONS

This study provides evidence that undergraduate ATs lack cultural competence and may not be able to provide culturally appropriate health care to their patient populations. The results found that students of color scored higher than their Caucasian counterparts did, but gender and year in school did not influence a student's level of cultural competence. It is important that we begin to investigate cultural competence within the field of athletic training, specifically within the educational process, so that we can provide optimal care to a diverse patient population. Educators should take care to incorporate cultural components (eg, race, ethnicity, gender, age, religion) into classroom activities and seek out opportunities to expose students to a variety of patient populations. Additionally, athletic training-specific measures or other

tools, such as the IAPCC, should be used in ATPs to truly determine the level of cultural competence displayed by ATSS. These measures could establish baselines to determine the effectiveness of cultural competence educational interventions. As students become better educated in cultural competence, we will continue to grow as a profession and provide higher-quality health care.

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