

Evaluating Diversity and Inclusion Among Faculty in US Dental Schools

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Received January 14, 2024

Accepted June 11, 2024

Electronic access June 30, 2024

Academic health programs must recruit and educate culturally competent health professionals capable of providing high-quality care for every patient. The composite of providers should resemble the United States (US) demographics to help ensure the cultural competence of the health care workforce. The aim of this study was to investigate the existence of racial/ethnic- and gender-associated disparities in academic dentistry. We extracted data from the American Dental Education Association (ADEA) Trends in Dental Education database, analyzed the demographic characteristics of the faculty workforce, and compared it to US Census data. Based on the results, there are notable disparities in academic dentistry, with Hispanics/Latinos and Black/African Americans being substantially underrepresented among dental faculty members. Although female representation among faculty members has grown, females remain less likely than males to achieve high degrees of professional advancement. In conclusion, diversity and inclusion are necessary elements to improve equity in dentistry; therefore, efforts to create a more diverse and inclusive workforce are crucial to reach the highest level of care.

Introduction

Although dental research and care have seen remarkable progress in recent decades, OH disparities and access to care barriers for large segments of the US population still remain¹. The predicted increase of diversification of the country may exacerbate the current situation and require actions to ensure that future dentists will be well prepared and culturally competent to provide the best possible care for all patients². Research showed that people were more likely to have dental problems if they were low-income, uninsured, from certain racial/ethnic minority backgrounds, immigrants, from rural areas, or self-identified as lesbian, gay, bisexual, or transgender (LGBTQ+)^{3,4}. The dental workforce needs to be culturally competent and as diverse as the US population to attend the needs of everyone⁵. Diverse healthcare teams have been shown to enhance innovation and productivity, reduce attrition and burnout, and provide more equitable patient care⁶⁻⁹. However, in dentistry, as well as in many areas of health care, the workforce continues to experience significant inequalities especially across minority groups, a situation that has been aggravated by the COVID-19 pandemic^{10,11}. Recent epidemiological evidence has recognized racism as a determinant of health. Racism was associated with poorer general health (i.e. physical and mental health)¹². Patients in race-concordant relationships with their providers rated their visits as significantly more satisfactory than patients in race-discordant relationships. Providers and patients with matching backgrounds have been shown to have better communication, satisfaction, and health outcomes¹³. Although considerable work has been per-

formed to improve diversity, equity, and inclusion (DEI, Table 1 Definition), little is known about the demographic representation of dental academic faculty and its correlation with the US population¹⁴. The objective of this study was to compare the racial/ethnic and gender composition of the academic dentistry workforce with that of the general US population. The goal is to raise awareness, engagement, and success of DEI representation that will ultimately result in improving the OH care of patients.

Results

Historically Underrepresented Race and Ethnic (HURE) faculty includes the following four race and ethnic categories are included in the study: Black or African American, Hispanic or Latino, American Native, and Native Hawaiian or Other Pacific Islander. The US Department of Education is required to collect data on faculty HURE categories and gender from institutions of higher education. Women have slowly increased their numbers in academic dentistry across the US in the last decade. There was an increased female representation, from 33% in 2011–2012 to 41% in 2021–2022, a corresponding decrease in male faculty, from 67% to 57%, and an increased share of faculty not wishing to report their gender or not identifying themselves as either male or female, 0.3% in 2011–2012 to 2% in 2021–2022 (Figure 1).

Considering the distribution of faculty by academic rank and gender in Figure 2, women dominated the lower ranks of the academic workforce including Lecturer (4% female, 0.3% male), Instructor (12% female, 2.4% male), and Assistant Professor

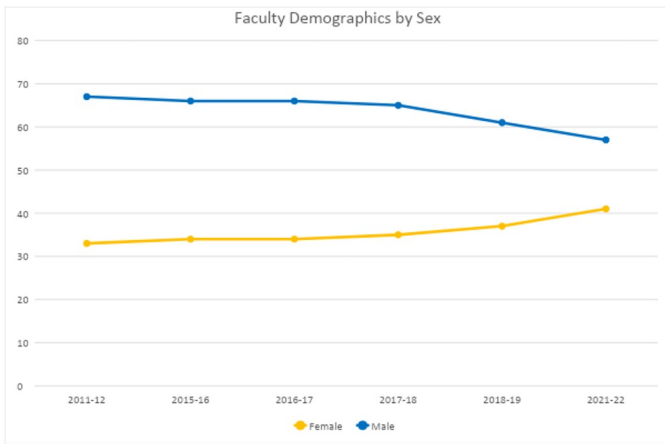


Fig. 1 Trend in Gender Composition of US Dental Faculty, 2011–2012 to 2021–2022 Academic Years.

(27% female, 21% male). Conversely, males were more likely than females to hold higher rank academic appointments, including Associate Professor (6.6% female, 9.4% male) and Professor (5.3% female, 6.3% male). Similarly, the ratio of male-to-female Department Chairs was 10:1.

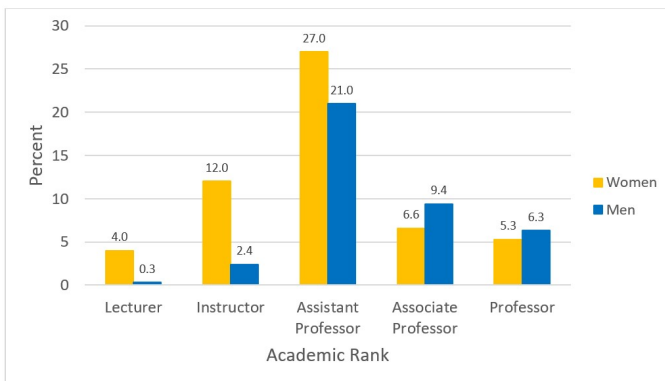


Fig. 2 US Dental Faculty Distribution by Academic Rank and Gender, 2021–2022.

Figure 3 presents the trends in the composition of the US dental faculty workforce by race/ethnicity from 2012 to 2021. In 2021, 56% of the faculty identified themselves as White, followed by Asian (13%), Hispanic/Latino (9%), and African American/Black (4%). White faculty showed a steady decline in their proportion of the dental education workforce, from 71% in 2011 to 67% in 2015, 62% in 2021, and 56% in 2022. Asian faculty showed a steady increase from 10% of dental faculty in 2011 to 13% in 2021. The proportion of faculty that identified as Hispanic or Latino fluctuated between 7% and 9% during that period, and African American/Black faculty stayed constant at 4% since 2011 to present.

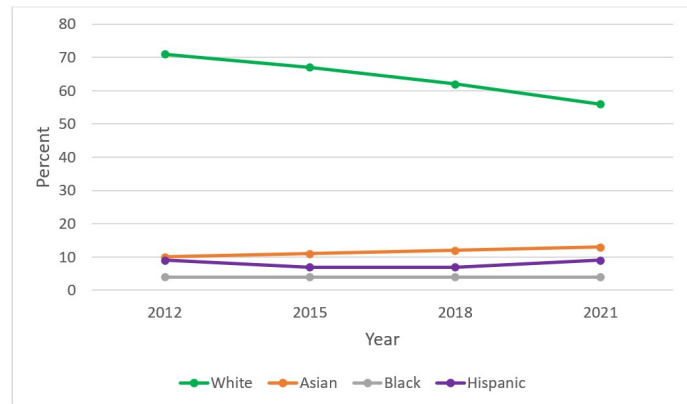


Fig. 3 Trend in Composition of US Dental Faculty by Race/Ethnicity, 2012–2021.

Figure 4 displays a population parity analysis between the US population and dental school faculty (2019) by race/ethnicity. White representation of faculty almost matched the US population with 62% of the faculty and 60% of the US population. Asians comprised 12% of dental faculty, which was double their representation (6%) in the US population. In contrast, Hispanics comprised 9% of dental faculty, which was one-half of its representation in the US population (18%), and Blacks/African Americans were severely underrepresented, comprising 12% of the US population but just 4% of US dental faculty workforce.

Percentages may not total 100% in this analysis because of rounding, other racial or ethnic categories with minimal representation, or a newly added category of Non-Resident Alien that could reach up to 10% of the faculty workforce but is not considered a separate racial or ethnic category by itself.

Discussion

The primary finding from our study is that — although gaps have narrowed in the past decade — women, Blacks/African Americans, and Hispanic/Latinos remain substantially underrepresented among faculty at US dental schools relative to the demographic composition of the US population. In addition, women in dental education are much less likely than men to hold senior academic ranks. Consistent with our study, prior research shows that faculty diversity and inclusion has been an ongoing challenge in academic dentistry. The disparity is even more profound when leadership positions are considered for women and faculty from minority backgrounds¹¹. Women revealed growing numbers across all levels of academic dentistry but did not achieve adequate representation in high level positions over the period of time analyzed. The ratio of female Department Chairs was almost 1 to 10 compared to male in 2021. Women have historically received less pay than men at all career levels; how-

ever, no difference in academic productivity was seen between male and female educators or researchers¹⁵. Women and minorities have been underrepresented in leadership positions, and experienced disproportionate workload compared to men^{5,16}. Family-friendly policies such as paid maternity/paternity leave and a pause on the “tenure clock” need to be considered by academic institutions to facilitate the recruitment and retention of parents, especially women^{17,18}.

In order to improve diversity of its workforce, institutions must create a humanistic environment as well as a climate of valuing DEI, and provide the resources to do it¹⁹. Frequently, women and people from minority groups report experiencing unprofessional behavior directed toward them¹⁵. Once new faculty members from minority backgrounds begin their career, encountering unfair treatment can affect the ability of an institution to retain them and affect their opportunity to obtain leadership positions¹⁵. Faculty diversity is only sustainable if inclusion and equity truly exist²⁰. One strategy suggests increasing the diversity of the applicant pool by funding enrichment programs for high school and college students from diverse backgrounds²¹. Helping to overcome socioeconomic barriers to medical careers also has been shown to be beneficial as well²². In conclusion, based on data obtained from the ADEA national database, significant disparities exist regarding sex and race/ethnicity in academic dentistry. Although representation of females in dental academia has grown, they were less likely than males to achieve higher degrees of professional advancement. There is still a long way to go to achieve parity with the proportion of women and minority groups represented in the US population especially in regard to leadership positions. Academic dental institutions must demonstrate their commitment to meaningful diversity, equity, and inclusion through tangible actions. This necessitates a cultural shift that fosters open dialogue and continuous learning at every level, building bridges and facilitating inclusion. The ultimate goal of DEI is an inclusive environment that dismantles racism, sexism, and other types of discrimination by promoting social justice. Dedicated resources and recognition for these efforts will help ensure a culture of inclusive excellence for the dental workforce and patient care.

Methods

The aim of this study was to investigate the demographic data in academic dentistry for the years 2011–12 to 2021–22. The analysis utilized the ADEA database and concentrated on the gender and race/ethnicity composition of the dental school workforce²³. The ADEA Survey of Dental School Faculty is the main source of de-identified and aggregated data regarding the workforce of the US dental schools. This data collection has been conducted since the early 1980s. All ADEA demographic data plus the US Census data, for the selected variables, were entered in an Excel database (Microsoft Excel 2019). Faculty frequency distribu-

tions were computed, and then compared with the US Census population distribution. The reported status of diversity among US dental school faculty focuses on describing the racial, ethnic, and gender characteristics among faculty. Gender-related data considered only females and males, because ADEA’s answer categories for gender were “female,” “male,” and “do not wish to report” leaving other gender categories without representation. Faculty were further divided based on academic rank (e.g. lecturer, instructor, Assistant Professor, Associate Professor, and Professor) and leadership position (i.e. Department Chair).

Table 1 Definition of Diversity, Equity, and Inclusion

Term	Definition
Diversity	Refers to having representation of individuals with differences based on their social identity characteristics such as their ethnicity/race, socioeconomic status, age, gender, ability, language, religion, sexual orientation and gender identity, and geographical area, among others.
Equity	Ensures fair treatment and access to resources and opportunities for everyone.
Inclusion	Implies that all people experience a cultural climate that allows them to be a valued member of a community.

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