

## Chapter 13

# Measuring Diversity at a Historically Black College of Dentistry

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### ABSTRACT

*There are several excellent indices available to quantify diversity within a student body. Richness and evenness can be studied using Simpson's Index with its associated Reciprocal Index, and with Shannon-Weiner's Index "H" and Index "E". Lieberman provides the means to measure isolation and interaction, and Dissimilarity works well to identify segregated communities. Results using these indices show that the Historically Black College of Dentistry is a culturally vibrant and diverse academic and social environment. White students at the Historically Black College of Dentistry are more likely to enjoy interaction with other Whites than will Historically Black and Hispanic students at all other dental schools, except at the other Medical College, the only other HBCU with a dental school. Overall, there was no statistical diversity difference between the Historically Black College of Dentistry and all other dental schools over the 10 year study period. Statistically significant correlations between each index provided a framework for using each index in prediction modeling. Recent methods to manage multi-collinearity, such as extracting unstandardized residuals to use as adjusted coefficients add promise that all indices can be used in future diversity studies.*

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## **BACKGROUND**

The Historically Black College of Dentistry was founded in 1881 and is the 5<sup>th</sup> oldest dental school in the United States. It is accredited by the Commission on Dental Education.

The College has a pre-doctoral dental program with 365 students, 5 post-doctoral residency programs (Oral Surgery, Pediatric Dentistry, Orthodontics, General Practice Residency and Advanced Education in General Dentistry) that train 44 post-doctoral residents a year and a Dental Hygiene certificate program that graduates 15 hygienists a year. Supporting clinical, research and didactic efforts are 68 full time faculty, 14 part time faculty and a talented staff of 59 support professionals.

The Historically Black College of Dentistry was the first American dental school to accept women on equal basis with men and was the first American dental school to have a female dean. The Historically Black College of Dentistry and another Medical College have jointly produced 91% of all African American dentists who have graduated from an American dental school and the Historically Black College of Dentistry alone has produced more than 90% of all African American specialists in the fields of pediatric dentistry and orthodontics. More than 80% of the Historically Black College of Dentistry's doctoral graduates are accepted into post-doctoral residency programs each year, with the remainder returning immediately to provide care for the disadvantaged, uninsured and under-insured. The Historically Black College of Dentistry's graduates practice in 47 states across America and in 20 countries across the continents of Africa, Europe, Asia, North and South America.

## **SETTING THE STAGE**

There is a perception among many that Historically Black Colleges and Universities (HBCUs) are culturally and racially monolithic. Although

it is true that the majority of students at HBCUs are indeed African American, there is also great ethnic diversity at many of these institutions. The dilemma for the HBCU is to provide a well-rounded educational experience that prepares its graduates for global leadership, while remaining true to the purpose for which the university was established. The need to have far-reaching discussion and broad socialization as part of the university environment is integral to the development of the intellectual and ethical character of all graduates. Most HBCUs are probably more diverse than one might think. What was needed were the tools to make the assessment. The momentum for The Historically Black College of Dentistry to determine its diversity status occurred when a novel funding stream presented with the condition that the College become more diverse to receive the money. The Directorate of Assessments at The Historically Black College of Dentistry sought to first characterize the college's level of student body diversity and then to recommend minimal target levels comparable to those at peer majority institutions.

## **CASE DESCRIPTION**

### **Methods**

The purpose of this study was to describe diversity in relative terms of an absolute, with the absolute being the finite populations at The Historically Black College of Dentistry and in other dental schools in the United States. The scope of the study was limited to the current classification system used by American dental education organizations. Methods developed in the 1940's to measure species diversity in plant and animal ecosystems (Simpson, 1949) were adapted by Bell (1954), Duncan and Duncan (1955), Massey (1988), Lieberman (1981, 1982) and others to study social and residential segregation in the United States. These indices laid the foundation for our understanding of American socialization

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