

DIVERSITY OF PROFESSIONAL SCHOOL APPLICANTS OVER A TEN YEAR PERIOD IN THE UNITED STATES (2003-2013)

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ABSTRACT

Diversification is an important aspect of professional schools. As the representation of racial minorities has been steady at a fairly low percentage, professional schools have struggled with the lack of diversity in their student population for decades. There are numerous consequences resulting from this underrepresentation. The need for dental, medical, osteopathic treatments and law services is unmet for many racial and ethnic minorities. It is important to have the presence of minority health care professionals who may meet the needs of minority communities. In addition, the lack of diversity on the student body population also affects the quality of education. Diversity in education allows for learning that occurs through the interaction of people of different races and ethnicities. The object of this study is to assess the changes in the diversity of professional school applicants over a ten year periods using gender and race/ethnicity data in the United States.

KEYWORDS

Diversity, Dental School, Medical School, Law School, Osteopathic Medical School

1.INTRODUCTION

Professional schools have struggled with the lack of diversity in their student population for decades. The percentage of racial minorities in professional schools is consistently lower than the diversity reported by the US census [1]. There are numerous consequences resulting from this underrepresentation. It has been documented that racial minorities are more likely to seek out medical care from providers that share their backgrounds [2]. However, as there is a shortage of

such providers, the care of these minority groups suffer as a result. This phenomenon can be extrapolated to include other professional services such as law and dentistry [3]. The lack of diversity in the student body population also affects the quality of education. The 2013 diversity standard report put forth by the Commission on Dental Accreditation states that 'diversity in education is essential to academic excellence', and argues that a homogenous student body deprives the students of learning opportunities that occur when people of different backgrounds come together to stimulate thinking and discussion [4].

Efforts have been made to solve this issue. Numerous programs, such as affirmative action, the new diversity standard by the Commission on Dental Accreditation, and private initiatives implemented by schools designed to attract more diversity in their applications, have all been met with various degrees of success. This study aims to assess whether there has been a change in the diversity of professional schools applicants.

2. MATERIALS AND METHODS

The majority of the data was obtained from publically available sources that did not have any identifiable private or protected information. The data was collected from 2003-2013 for professional school applicants in dental, medical, law and osteopathic schools. Publically available registries from the American Dental Education Association, Association of American Medical College, Law School of Admission Council, the American Association of Colleges of Osteopathic Medicine and the Census were used to assess the differences in race/ethnicity and gender of the professional school applicants. The number of the schools and applicants were taken from the data provided by the American Dental Education Association, Association of American Medical College, Law School of Admission Council, and the American Association of Colleges of Osteopathic Medicine.

The racial groups that were assessed included American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino and White. The compound annual growth rates were calculated for each professional school over the ten year period. The standard formula for compound annual growth rate was used for the calculation. The percent change of the percent composition for 2003 and 2013 was calculated for each professional school.

3. RESULT

There has been an improvement in the diversity of Hispanic representation in dental, osteopathic, law and medical school applicants. Table 1 shows that the compound annual growth rates indicate that the highest percent change in dental and osteopath applicants were in the Hispanic or Latino race; the highest percent change in law applicants was in the American Indian or Alaska Native race; the lowest percent change in dental, osteopath and medical applicants were in the American Indian or Alaska race; and the lowest percent change in law applicants was in the white race. Table 1 indicates that the compound annual growth rate of male and female applicants was highest in osteopathic applicants and lowest in female law applicants.

Table 1. Compounded Growth Rate Over Ten Year Period

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Race/Ethnicity	Dental	Osteopath	Law	Medical
American Indian or Alaska Native	-4%	-4%	6%	1%
Asian	6%	11%	-2%	3%
Black or African American	3%	9%	-2%	2%
Hispanic or Latino	8%	13%	1%	5%
White	3%	8%	-5%	1%
Gender	Dental	Osteopath	Law	Medical
Men	3%	10%	1%	3%
Women	5%	8%	0%	4%

Figure 1 shows the highest percent change in composition of 39% in Hispanic applicants and the lowest percent change of -57% in American Indian or Native American applicants to dental school.

Figure 2 shows the highest % change in composition of 43% in Hispanic applicants and the lowest percent change of -72% in American Indian or Alaska Native applicants to osteopathic school. Figure 3 shows the highest percent change in composition of 153% in American Indian or Alaska Native applicants and the lowest percent change of -14% in white applicants to law school. Figure 4 shows the highest percent change in composition of 30% in Hispanic applicants and the lowest percent change of -12% in American Indian or Native American applicants to medical school.

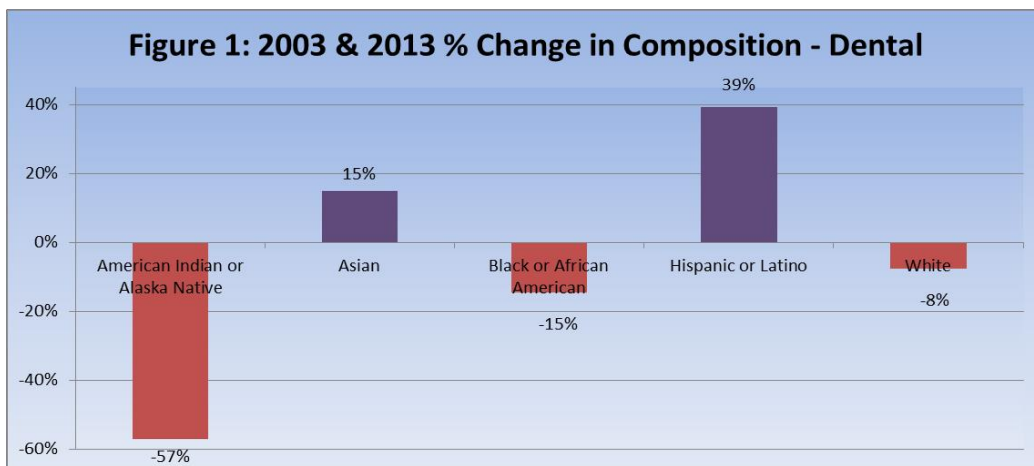


Figure 1. 2003 & 2013 % Change in Composition - Dental

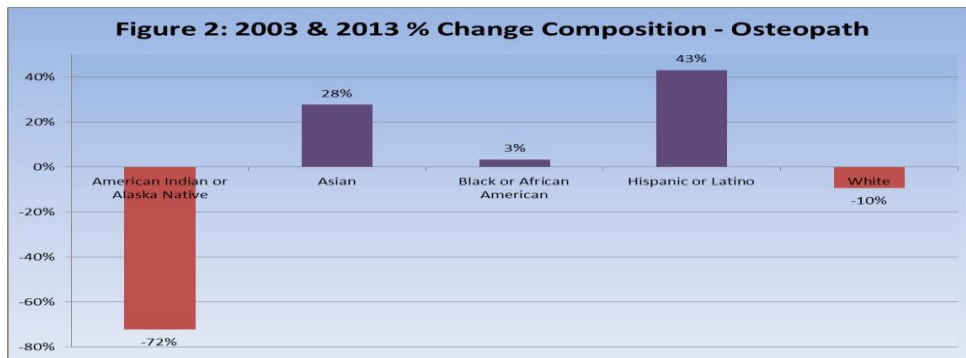


Figure 2. 2003 & 2013 % Change in Composition – Osteopath

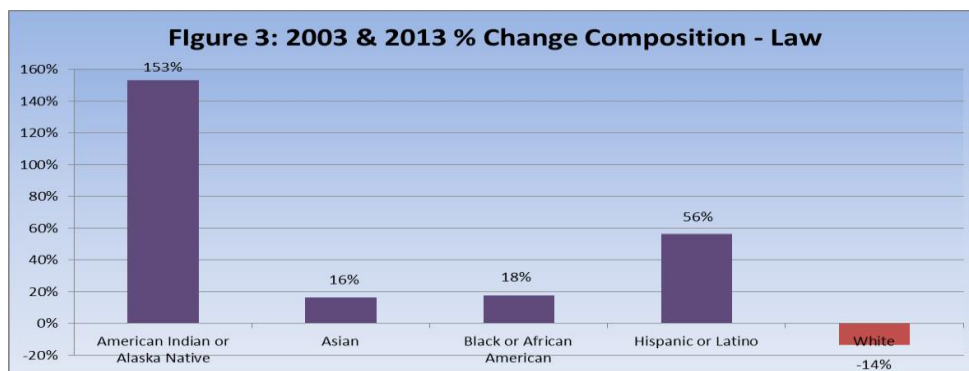


Figure 3: 2003 & 2013 % Change in Composition – Law

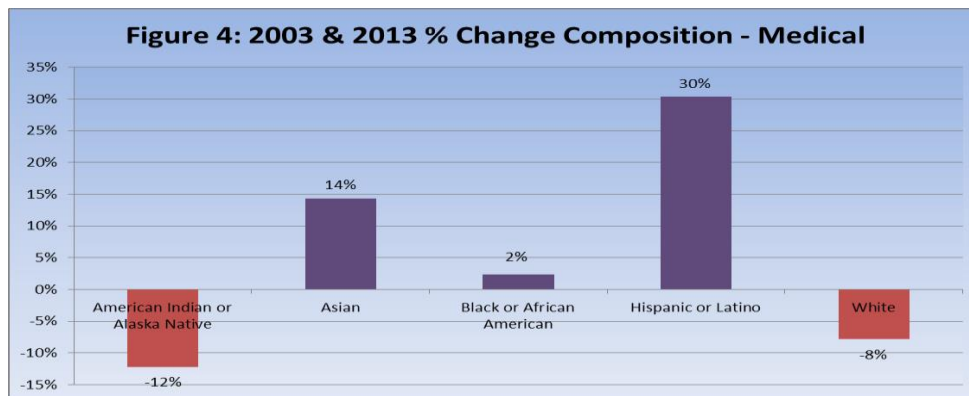


Figure 4: 2003 & 2013 % Change in Composition – Medical

Figure 5 shows a decrease in the percent composition of male applicants and an increase of female applicants to dental school. Figure 6 shows an increase in the percent composition of male applicants and a decrease of female applicants to osteopathic school. Figure 7 shows an increase in the percent composition of male applicants and a decrease of female applicants to law school. Figure 8 shows an increase in the percent composition of male applicants and a decrease of female applicants to medical school.

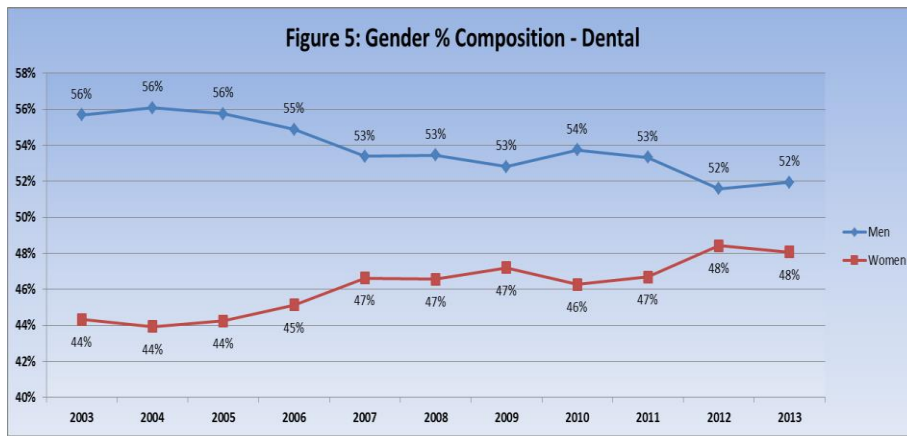


Figure 5: Gender % Composition - Dental

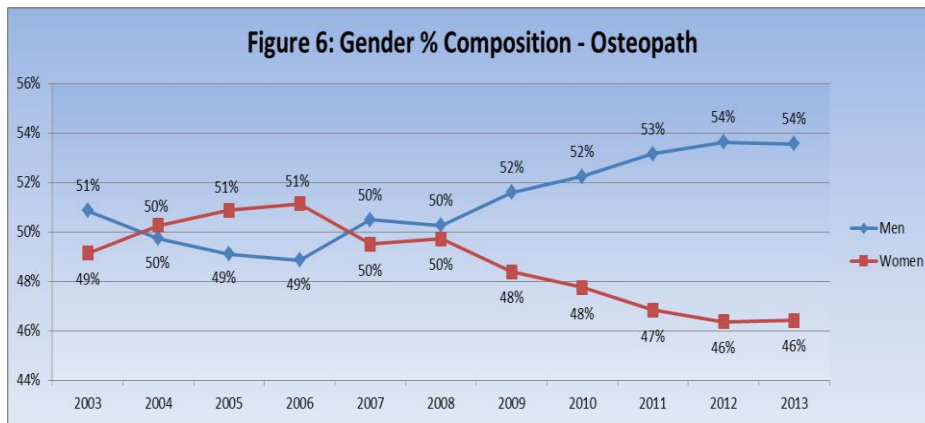


Figure 6: Gender % Composition – Osteopath

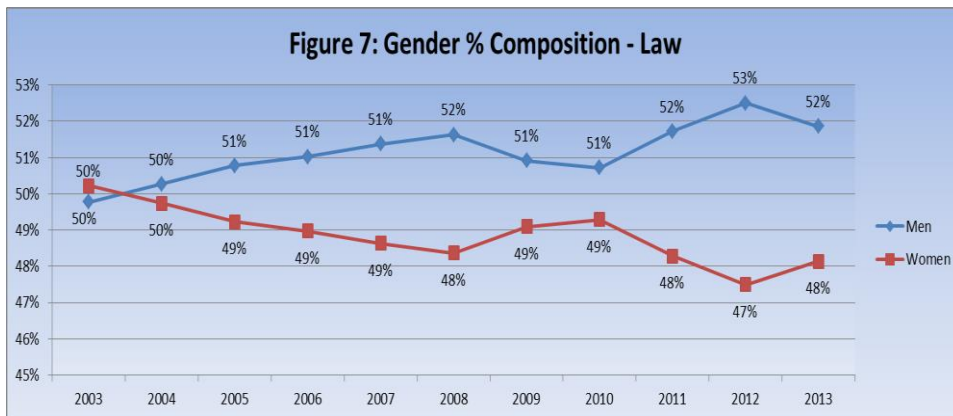


Figure 7: Gender % Composition – Law

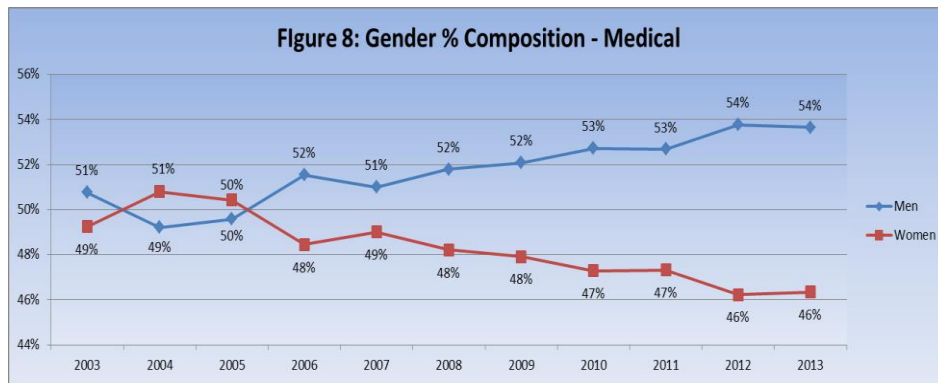


Figure 8: Gender % Composition – Medical

4. DISCUSSION

It is encouraging to see more students of Hispanic and Latino backgrounds apply to professional schools. However, one should keep in mind that according to the data provided by the US census, the majority of the US population increase between 2000 and 2010 was due to the increase in the Hispanics and Latino population. In that decade, the growth of the Hispanic and Latino population accounted for more than half of the increase in the total American population [5]. The dramatic increase in Hispanic and Latino professional applicants might be due to the large increase in their population in the US.

From the data presented above, Asian applicants showed the second largest increase among all other races. According to the US census, the Asian population grew by 43% in the decade spanning 2000-2010. The increase in Asian applicants to professional schools correlates with the increase in the US Asian population. One should note that the two fastest growing races in America, the Hispanics/Latinos and Asians, showed the largest increase in the percentage of applicants to professional schools. Furthermore, Hispanic and Latinos have a higher percentage increase than Asian applicants, and this correlates with the US census data [6].

The US Black/African American population stayed relatively stable, going from 12.7% in 2000 to 13% in 2010 [7]. Despite this, some changes were noted in the applicants to professional schools. Dental schools experienced a dramatic decrease in Black applicants, suggesting that more efforts are necessary to increase interest among Black students in the career of dentistry. Perhaps dental schools should look at law schools and their efforts in recruiting, because an extremely successful 18% increase in black applicants to law school was noted.

According to the US census, the white population decreased by 3% [8]. This change is reflected in the decrease in white applicants in dental, law, medical and osteopathic schools. The American Indian or Alaska Native population stayed relatively stable in the US during 2000-2010. However, significant changes were noted in the professional school applicants, decreasing dramatically in dental and osteopathic schools, but increasing 153% in law schools. However, it must be noted that the small sample size of American Indian or Alaskan Native applicants creates a magnified percentage change.

5. CONCLUSION

There has been an increase in Hispanic or Latino applicants applying to dental and osteopathic schools, and a decrease of Hispanic or Latino applicants applying to law schools. The largest decrease in applicants for dental, osteopath and medical school was in American Indian or Alaska Native. The greatest increase among American Indian or Alaska Native applicants was to law school. Fewer white students were applying to law school. Over the past 10 years, changes in diversity have been observed in the applicant pool to all professional schools.

In regards to gender, the composition of change from 2003 to 2013 in dental school applicants has shown a 7% decrease in men and an 8% increase in the number of women. The change in gender of Osteopathic school applicants shows a 5% increase in men and a 6% decrease in women. For law school applicants, the difference in gender percentages showed a 4% increase in men and a 4% decrease in women. The changes in medical school applicants showed a 6% increase in men and a 6% decrease in women.

In regards to race, the change in composition of applicants to dental school from 2003 to 2013 showed a decrease in American Indian or Alaskan native population by 57%. The change in Asian applicants was a 15% increase. The Hispanic or Latino category showed the largest increase at 39%. The white population has the least significant change at an increase of 8%.

For osteopathic schools, the change in applicants from 2003 to 2013 in regards to race showed a decrease of 72% in Native American or Alaskan natives. The Asian population showed a 28% increase in applicants. The Black or African American population showed the least significant change with a 3% increase. Hispanic or Latinos showed the largest increase at 42%. The white population increased in application number by 9%.

In the law school composition change, the largest increase was represented by the American Indian or Alaskan native category at 153%. The Asian, Black/African American, and White population showed an increase of 16%, 18%, and 14% respectively. The Hispanic/Latino population showed the second largest increase with a positive change of 56%.

The medical school application composition showed its largest change in the Hispanic or Latino population, which had a 30% increase in applications. The American Indian or Alaskan native group showed a decrease of 12%. The white population decreased by 8% and the Asian group increased by 14%. The Black or African American population showed the smallest change, increasing by 2%.

Although the gender contribution remains male dominated in applications for dentistry as of 2013, the contribution of male dental applications has trended downward since 2003. The only exception in this trend is the year 2010 when the percentage of male dental applications increased from 53% to 54%. However, the following year set the pattern back on the downward track when it moved from 54% to 53%, and then down to 52% in 2012.

Female dental applications have shown a trend in the opposite direction. The gender contribution of female applicants has increased from 44% to 48% since 2003. Furthermore, they have shown an upward trend with the exception of the year 2010 when they went from 47% to 46% contribution. However, the following year set the pattern back on the upward track when it moved from 46% to 47% in 2011.

The male gender contribution for osteopathic school applications shows an overall increase from 51% in 2003 to 54% in 2013. However, it fluctuates significantly throughout those 10 years. The female gender contribution for osteopathic school applications shows an overall decrease from 49% in 2003 to 46% in 2013. However, it fluctuates significantly throughout those 10 years.

Law school gender application contributions are characterized by an increase in male applications from 50% in 2003 to 52% in 2013. The percentages fluctuated throughout the 10 year span, but were always higher than 50%. For female law applications, the contribution was 50% in 2003 and changed to 48% in 2013. The female application contribution fluctuated significantly throughout the 10 year span, but was always lower than 50%.

The medical school application contributions exhibit an increase in male applications from 51% to a high of 54% in 2013. The lowest percentage in male applications was 49% in 2004. The female applications showed a decrease from 49% in 2003 to 46% in 2013.

Potential strategies for addressing these imbalances include initiating programs to high school and college students in order to expose them to the different professional opportunities. Professional schools should hold fairs and events to allow high school students to become aware of different career options, as this will plant the seed for their college studies. Professional schools should organize clubs to increase the awareness of students to different career opportunities. Field trips and summer enrichment programs for high school students will increase their knowledge and it will enable them to have hands on experience for their future career choices. Additionally, colleges should create opportunities for rotational programs. Creating opportunities for mentorship and early exposure to science, technology and law might also help to allow for diversification of applications to professional schools. Finally, it is important to track minority communities, to see if professionals are practicing in these underserved areas.

Evaluating these programs effectively by race, ethnicity and gender provides a vital understanding of the situation. It is important for health care leaders and law professionals to commit to increasing the diversity of professional school applicants.

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