

Likelihood of Attaining Orthopaedic Leadership Based on Ethnicity, Race, and Gender

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INTRODUCTION: Several projects in the past have measured current levels of diversity in orthopaedic academic leadership. These studies noted that leadership diversity lags behind the diversity of the workforce as a whole, suggesting that some individuals from different races/ethnicities and genders may face different challenges in attaining leadership positions after entering the field. This study aims to investigate which minorities face decreased odds of attaining medical leadership. The study quantifies the odds that residents and full time faculty have of attaining chairperson roles over a set period of time, from 2007 to 2019. This knowledge will help direct future efforts in diversifying academic leadership and help promote equal opportunity in leadership attainment.

METHODS: Demographic data were gathered from The Journal of the American Medical Association and the Association of American Medical Colleges. Data detailed the ethnic, racial, and gender makeup of the residents and academic leadership in 2007 and 2019 of eight different surgical and nonsurgical specialties. Odds ratios were calculated to quantify the correlation between race, ethnicity, and gender and the odds of becoming a chairperson, treating race/ethnicity and gender as an exposure and chairperson status as an outcome. In accordance with prior literature, significance was determined by whether or not 1 was included in a 95% confidence interval of the odds ratios. Confidence intervals below one were significantly correlated with decreased odds. Confidence intervals above one were significantly correlated with increased odds. Confidence intervals including one were not significant for either increased or decreased odds.

RESULTS:

Within orthopaedic residents from 2007, several odds ratios showed significant increased or decreased odds of attaining leadership. There were significantly decreased odds for females at 0.29 (0.12 - 0.72), Asian Americans at 0.37 (0.16 - 0.85), and Other at 0.18 (0.06 - 0.57). There were significantly increased odds for Whites at 3.43 (1.99 - 5.91). Comparing 2007 orthopaedic faculty to chairpersons, there were significantly decreased odds for females at 0.27 (0.11 - 0.66) and Other at 0.22 (0.07 - 0.69), and increased odds for Whites at 2.32 (1.34 - 4.02). African American and Hispanic / Latino groups in orthopaedic surgery did not show any significant correlation between race and increased or decreased odds of leadership attainment.

For the combined All Specialties, significantly decreased odds among residents were found for Asian Americans at 0.31 (0.25 - 0.37), Hispanic / Latino at 0.55 (0.41 - 0.72), Other at 0.26 (0.19 - 0.37), and female at 0.21 (0.18 - 0.24). Significantly increased odds were found for Whites at 3.59 (3.14 - 4.11). For faculty, significantly decreased odds were found for Asian Americans at 0.65 (0.54 - 0.79), Other at 0.39 (0.28 - 0.54), and females at 0.36 (0.31 - 0.42). Significantly increased odds among faculty in all specialties were found for Whites at 1.42 (1.24 - 1.62) and African Americans at 1.36 (1.05 - 1.76).

DISCUSSION AND CONCLUSION:

Overall, the lowest odds were observed in females and those who identify with a less well represented group included in the Other category, with these two groups facing significantly decreased odds in all comparisons. Asian Americans also faced significantly decreased odds of attaining leadership in almost all categories, suggesting that despite higher representation overall in residency, there may be barriers or other contributing factors to reduced leadership acquisition for this group. Some racial/ethnic groups showed greater odds of attaining leadership, with African Americans not exhibiting significantly decreased odds in any categories, and even attaining significantly increased odds in the All Specialties Faculty category with odds of 1.36 (1.05 - 1.76). Though this statistic may suggest improving equality of opportunity for certain groups, it is important to note that this reflects only promotion to academic leadership after entering the field, not the overall representation of groups within the field. Overall, differential odds of various races, ethnicities, and genders attaining leadership positions suggests that individual groups may have unique factors influencing leadership attainment, some of which, for example, could be differences in challenges, barriers, or professional preferences. This information provides important insights for future efforts to diversify the field of orthopaedics.