Patterns in Dentistry’s Gender Income Gap

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Study Objectives

• To evaluate the impact of various factors on dentists’ personal annual income.

• Personal characteristics: gender, race, age, nativity, bilingualism, migration, disability.

• Employment characteristics: practice ownership, hours worked per week, weeks worked per year, work setting, source of personal health insurance, commuting time to work.

• Household/family characteristics: partner/spouse’s occupation-education level, number of children, presence of older dependents, household income.
Data and Methods

• 2014-2018 American Community Survey
• Restricted to dentists working 350-2500 hours, and 43.5-51 weeks, in the last year.
• Restricted to dentists without missing information for interest variables.
• Analytic sample = 143,671 dentists.
• Descriptive statistics: chi-square and t-tests.
• Regression analysis: Ordinary Least Squares (OLS).
Some Descriptive Statistics

- Female dentists earned less than male dentists: $159,614 vs $211,398.
- Female dentists belonged to more diverse racial/ethnic groups than male dentists: 59.5% white vs 77.5%.
- Female dentists were less likely to be bilingual than male dentists: 35% vs 20%.
- Female dentists were less likely to be practice owners than male dentists: 45% vs 66%.
- All differences significant at P<0.001.
## Some Descriptive Statistics

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Female Dentists</th>
<th>Male Dentists</th>
<th>All Dentists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>n</strong></td>
<td><strong>%</strong>, <strong>Mean(range)</strong></td>
<td><strong>n</strong></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>26,431</td>
<td>170,234 (106-902,215)</td>
<td>76,989</td>
</tr>
<tr>
<td>Black or African American, non-Hispanic</td>
<td>2,459</td>
<td>144,769 (15815-792,242)</td>
<td>2,282</td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>10,597</td>
<td>144,520 (1-727,404)</td>
<td>12,932</td>
</tr>
<tr>
<td>Other races, non-Hispanic</td>
<td>1,282</td>
<td>152,759 (4,143-572,400)</td>
<td>1,906</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3,616</td>
<td>138,742 (10,358-839,408)</td>
<td>5,177</td>
</tr>
</tbody>
</table>

Among Black or African American non-Hispanic dentists, women earn $16,626 more than men.
Ordinary Least Squares Regression

• Linear regression analysis
• Uncovers associations between dentists’ personal annual income and each of their characteristics, adjusting for all other characteristics.
• Dependent variable: $\log(\text{Personal Annual Income})$
• Independent variables: all demographic, employment, and household/family characteristics listed before.
• Also adjusted for year in which the dentist was surveyed, and the state in which the dentist worked.
Some OLS Regression Results

• Bilingual dentists earned less than those who only spoke English: RR = 0.92, P=0.02

• Dentists who were practice owners earned more than those who were employed: RR = 1.08, P=0.001

• Dentists with a partner/spouse earned more than those without.

• Dentists with ≥3 children earned more than those without any children: RR = 1.20, P<0.001

• Dentists with older dependents in their household earned less than those who did not: RR = 0.90, P=0.006
Some OLS Regression Results

- Black or African American, non-Hispanic dentists earned less than white, non-Hispanic dentists: RR = 0.76, P<0.001
- Dentists belonging to other non-Hispanic races (ie not white, Black or African American, or Asian) earned less than white, non-Hispanic dentists: RR = 0.82, P=0.02
- Hispanic and Asian, non-Hispanic dentists did not have significant income differences from white non-Hispanic dentists.
### Some OLS Regression Results

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Risk Ratio</th>
<th>95% Confidence Interval</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Hispanic</td>
<td>0.80</td>
<td>0.85 - 0.75</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Black or African American, non-Hispanic</td>
<td>1.24</td>
<td>1.58 - 0.98</td>
<td>0.07</td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>0.79</td>
<td>0.93 - 0.68</td>
<td>0.003</td>
</tr>
<tr>
<td>Other race, non-Hispanic</td>
<td>1.18</td>
<td>1.69 - 0.83</td>
<td>0.36</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.80</td>
<td>0.96 - 0.68</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Female dentists earn significantly less than male dentists in the following racial/ethnic groups:
- White, non-Hispanic: 20% less
- Asian, non-Hispanic: 21% less
- Hispanic: 20% less
Conclusions

• Dentists’ demographic, employment and household characteristics significantly impact their earnings.

• Differing patterns of gender disparities in personal income were observed by racial/ethnic groups.

• Characteristics such as bilingualism, race/ethnicity, and practice ownership significantly impact dentists’ income.
Acknowledgements

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Questions?

• For more information, please email me at: tfernando@albany.edu

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