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.

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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).

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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.

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Some Descriptive Statistics

Personal Annual Income (2018 $)	Female Dentists N=44,385		Male Dentists N=99,286		All Dentists N=143,671	
	n	%, Mean(range)	n	%, Mean(range)	n	%, Mean(range)
Race/ethnicity						
White, non-Hispanic	26,431	170,234 (106-902,215)	76,989	218,938 (1-1,093,079)	103,420	206,491 (1-1,093,079)
Black or African American, non-Hispanic	2,459	144,769 (15815-792,242)	2,282	128,143 (5,353-628,485)	4,741	136,766 (5,353-792,242)
Asian, non-Hispanic	10,597	144,520 (1-727,404)	12,932	193,393 (531-1,086,594)	23,529	171,381 (1-1,086,594)
Other races, non-Hispanic	1,282	152,759 (4,143-572,400)	1,906	165,879 (5,094-785,874)	3,188	160,603 (4,143-785,874)
Hispanic	3,616	138,742 (10,358-839,408)	5,177	197,689 (158-628,120)	8,793	173,448 (158-839,408)

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

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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(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.

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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

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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.

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Some OLS Regression Results

Female vs Male	Log Personal Annual Income (in 2018 dollars)			
	Risk Ratio	**95% Confidence Interval**		**_P_-value**
		Upper Limit	**Lower Limit**	
Race/ethnicity				
White, non-Hispanic	**0.80**	0.85	0.75	<0.001
Black or African American, non-Hispanic	1.24	1.58	0.98	0.07
Asian, non-Hispanic	**0.79**	0.93	0.68	0.003
Other race, non-Hispanic	1.18	1.69	0.83	0.36
Hispanic	**0.80**	0.96	0.68	0.01

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

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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.

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