

Gender Differences and Predictors of Work Hours in a Sample of Ontario Dentists

Julia C. McKay, DDS, PhD; Atyub Ahmad, BSc(Hon), MMI, DDS; Jodi L. Shaw, DMD, MSc, FRCD(C); Fahim Rashid, DDS, MSc, FRCD(C); Alicia Clancy, DDS, MSc, BMSc; Courtney David DDS, Rafael L.F. Figueiredo, DDS, MSc, FRCD(C); Carlos Quiñonez, DMD, MSc, PhD, FRCD(C)



Cite this as: *J Can Dent Assoc* 2016;82:g26

Abstract

Purpose: To determine the influence of gender on weekly work hours of Ontario dentists.

Methods: In 2012, a 52-item survey was sent to a random sample of 3000 Ontario dentists (1500 men and 1500 women) to collect information on personal, professional and sociodemographic characteristics. The resulting data were analyzed using descriptive statistics and linear regression modeling.

Results: The 867 respondents included 463 men, 401 women and 3 people whose gender was unreported, yielding a response rate of 29%. Most dentists worked full-time, with men working, on average, 2 h/week longer than women. Younger dentists worked more than older dentists. Practice ownership increased weekly work hours, and men reported ownership more often than women. Canadian-trained women worked significantly fewer hours than those trained internationally. Women were more likely than men to work part time and take parental leave and more often reported being primary caregivers and solely responsible for household chores. Women with partner support for such tasks worked more hours than those who were solely responsible. Dentists with children ≤ 3 years of age worked fewer hours than those without children; however, after controlling for spousal responsibility for caregiver duties, this effect was eliminated. More women than men reported making concessions in their career to devote time to family.

Conclusion: Gender, age, practice ownership, training location and degree of spousal support for household and caregiving responsibilities were predictors of weekly work hours. For women specifically, training location and household and caregiving responsibilities predicted weekly work hours.

The shift toward more women in the dental profession is ongoing, and the impact of this remains unclear. Limited evidence suggests that female dentists work fewer hours than male dentists, are less interested in the business aspect of the profession and are not sufficiently represented in academia and specialty practice.¹⁻⁷ A decade-old Canadian survey comparing male and female dentists found differences in terms of practice characteristics, work hours, attitudes and income.⁴ However, studies controlling for practitioner age, marital status, children and practice patterns are lacking. Likewise, clarity regarding barriers, opportunities and the impact

See also:

J Can Dent Assoc 2016;82:g27

of societal gender roles is also needed. Additional insight can be derived from the medical literature, which has highlighted differences between male and female physicians in terms of practice patterns, remuneration, career satisfaction, specialty selection and family-career balance.⁸⁻¹⁰

One issue in particular that has been theorized to be affected by this demographic shift is labour supply. Male dentists have reported working 6.9 more hours a week than female dentists, with women citing child care issues as the main reason for part-time work.³ In another survey, 47% of female dentists reported part-time employment, with the primary reason again being child care issues followed closely by personal choice.¹¹ Having children was, again, found to reduce women's work time by 7 h/week, while having no impact on men's hours.¹² In another survey, married female dentists 25–32 years of age reported working 3.5 fewer hours a week than similarly aged married men, whereas unmarried female dentists reported working the same number or more hours than unmarried men.⁴ Likewise, in a study of physicians 7 years after graduation, only 64% of women with children reported working full time (vs. 95% of men).¹⁰

Given the rapid increase in the number of female dentists in Canada over the past decade and its potential impact on labour supply, the aim of this paper was to determine whether gender is a determinant of the number of hours worked per week by a sample of Ontario dentists and which personal, professional and sociodemographic factors predict the number of hours worked by male and female dentists.

Methods

Study Design

A random sample of 3000 dentists practising in Ontario was selected from the Royal College of Dental Surgeons of Ontario provider listing of 8398 dentists (December 2010).¹³ This survey population was selected, as most Canadian dentists practise in Ontario, the provincial population is ethnically diverse reflecting the overall diversity in Canada¹⁴ and gender differences were not expected to vary by province. An initial sample size of 941 was estimated based on the most conservative measure of variation in response to questions (50/50 split), a 95% confidence level and a 3% sampling error.¹⁵ This sample size was tripled to 3000, given an expected response rate of 40% or less. The sampling frame was first stratified by gender based on the dentist's name, and a random start systematic sample was drawn from each stratum (1500 men and 1500 women). Ethics approval was received

from the University of Toronto's Office of Research Ethics (protocol reference #27977) and a single mail-out was completed in the summer of 2012.

Survey Instrument

A 52-item survey was designed to assess gender differences with respect to professional issues (e.g., work-practice characteristics, clinical decisions, retirement, business knowledge, relationship with staff, specialty and advanced education, career satisfaction, career breaks, leadership and academia) and personal issues (e.g., marital status, children, familial responsibilities and stress/conflict resulting from balancing multiple roles) faced by dental practitioners. The survey was pilot-tested for clarity and ease of completion.

Statistics

All analyses were conducted using STATA v. 13.0 (StataCorp LP, College Station, Texas, USA).

Descriptive Analysis

A descriptive analysis was followed by a gender-stratified analysis assessing differences using Student's *t* tests for continuous and binary variables and χ^2 tests for categorical variables.

Regression Model Specifications

Preliminary univariate regressions were conducted to assess the significance of variables in predicting the outcome. These included demographic controls, such as gender, age, marital status, location of dental training and graduation year. Work-related predictor variables, such as practice location, most enjoyable aspects of career and speciality training, were also used. In addition, a composite of 5 variables assessing respondents' self-reported business acumen was constructed. Predictor variables assessing familial characteristics, such as the extent of concessions made in a respondents' career to pursue family life, the extent of concessions made by a respondent's partner to aid in the dentist's career, responsibility for household chores and primary caregiver duties, were also used. The absence or presence of children, stratified by dependent age, was also used as a control variable.

Regression Estimation Procedures

Development and testing of the initial model were done using ordinary least squares (OLS) regression. Given the non-normal distribution of residuals (Smirnov-Kolmogorov test), potential outliers and heteroskedasticity, the initial OLS model was re-run using robust regression. The latter technique gives less weight to observations with large residuals that would otherwise bias the results. Both the

OLS and robust regression indicated that no observations were eliminated and similar effects of the various predictor variables were found.

Results

Descriptive Findings

The 867 dentists who responded included 401 women (46%), 463 men (54%) and 3 people whose gender was unreported; after taking into account undeliverable surveys, this yielded a response rate of 29%. Most respondents were general practitioners (85.9%), 40–59 years of age (60%), had completed their dental undergraduate training between 1981 and 2000 (57%) and were Canadian-trained (80%) (Table 1).

Work-related statistics revealed that dentists worked an average of 36 h/week. Most (82%) worked full time (≥ 30 h/week) and were practice owners or partners (78%). Familial statistics revealed that most dentists were married (84%) and had children (83%). Most reported some degree of spousal support in terms of both primary caregiving and household responsibilities (61% and 65%, respectively).

Gender-stratified analyses revealed that a higher proportion of male dentists were specialists (17% men vs. 11% women, $p = 0.02$), tended to be older (62% men vs. 33% women ≥ 50 years, $p < 0.001$) and were more often Canadian-trained (86.2% men vs. 72.8% women, $p < 0.001$).

On average, male dentists worked an additional 2 h/week ($p < 0.01$), with the majority of both men and women working full time (87% men vs. 77% women, $p < 0.01$). Men were more likely to be practice owners (84% men vs. 71% women, $p < 0.01$), and they reported a marginally higher level of self-confidence in their business knowledge and skills (men scored 3.8 on a scale of 1 to 5; women 3.7, $p < 0.01$). A similar proportion of male and female dentists indicated that they enjoyed the financial reward of dentistry, managing others and maintaining a structured work schedule. However, more women indicated that the career aspects they enjoy the most were the ability to secure part-time work (48% women vs. 24% men, $p < 0.01$) and parental leave (19% women vs. 5% men, $p < 0.01$).

Familial data revealed that a higher proportion of men had children (88% men vs. 78% women, $p < 0.01$) and had 1 or more child aged ≥ 8 years (69% men vs. 49% women, $p < 0.01$). In contrast, a higher proportion of female dentists had children aged ≤ 7 years (29% women vs. 19% men). More female dentists considered themselves to be primary caregivers (24% women vs. 8% men) and solely responsible for household chores (41% women vs.

10% men). Female dentists also perceived themselves to have made concessions in their career in favour of family significantly more than men ($p < 0.01$), while male dentists perceived that their partner had made significant career concessions to aid in their career ($p < 0.01$).

Predictors of Work Hours/Week

Detailed results of univariate and multivariate regression analyses are presented in Tables 2 and 3, respectively. As the results of both the OLS and robust regression models were similar, relationships were characterized based on the final robust regression specification.

Male dentists worked significantly more hours a week than female dentists ($p < 0.01$). Dentists aged < 60 years worked significantly more hours a week than older dentists ($p < 0.01$), with the discrepancy decreasing with advancing age. Practice ownership increased the number of work hours ($p < 0.01$). Canadian-trained dentists worked fewer hours a week than their internationally trained counterparts ($p < 0.01$).

Considering familial determinants, dentists who perceived having some level of spousal support for household chores or primary caregiver duties worked significantly more hours a week than those who perceived themselves as solely responsible. Dentists with children aged 0–3 years of age worked significantly fewer hours a week than those without children ($p < 0.01$); however, this effect became non-significant after controlling for spousal responsibility for primary caregiver duties. Finally, married dentists were found to work significantly fewer hours a week than those who were single in both the univariate and initial multivariate analyses; this effect became marginally significant ($p = 0.059$) after controlling for spousal responsibility for caregiver status.

Canadian-trained female dentists worked significantly fewer hours a week than those trained internationally ($p < 0.01$), while the effect of training location was not significant for men. When looking at familial predictors, female dentists with some level of spousal support for both household chores and primary caregiver duties worked significantly more hours a week than those who were solely responsible for those tasks ($p < 0.05$); this effect was not significant for men. The effect of having children was not significant for either gender, but only after controlling for spousal responsibility for primary caregiver duties for female dentists.

Table 1: Sociodemographic, work and familial characteristics of respondents.

| Variables | All respondents (n = 867) | | Male dentists (n = 463) | | Female dentists (n = 401) | | t* | p† |
|--|------------------------------|-------|----------------------------|-------|------------------------------|------|-------|--------|
| | Mean or proportion | SD | Mean or proportion | SD | Mean or proportion | SD | | |
| Dependent variables | | | | | | | | |
| Work h/week, mean | 36.15 | 0.33 | 37.08 | 9.38 | 35.01 | 9.89 | -3.11 | < 0.01 |
| Full time (≥ 30 h/week) dentists (reference: part time/< 30 h/week) | 0.82 | 0.38 | 0.87 | 0.34 | 0.77 | 0.42 | -3.75 | < 0.01 |
| Practice owner/sole or partner (reference: associate) | 0.78 | 0.42 | 0.84 | 0.38 | 0.71 | 0.47 | -4.56 | < 0.01 |
| Independent variables | | | | | | | | |
| Demographics | | | | | | | | |
| Dental training at Canadian university (reference: international university) | 0.80 | 0.40 | 0.86 | 0.35 | 0.73 | 0.45 | -4.87 | < 0.01 |
| Graduation year, mean | 1989.19 | 11.30 | 1985.69 | 11.46 | 1993.21 | 9.69 | 10.08 | < 0.01 |
| Graduation year by group | | | | | | | | |
| < 1970 | 0.04 | 0.20 | 0.08 | 0.27 | 0.00 | 0.05 | | |
| 1971–1980 | 0.20 | 0.40 | 0.29 | 0.45 | 0.10 | 0.30 | | |
| 1981–1990 | 0.30 | 0.46 | 0.30 | 0.46 | 0.30 | 0.46 | | |
| 1991–2000 | 0.27 | 0.44 | 0.20 | 0.40 | 0.34 | 0.47 | | |
| ≥ 2001 | 0.19 | 0.39 | 0.13 | 0.34 | 0.26 | 0.44 | | |
| Dental specialist (reference: general dentist) | 0.14 | 0.35 | 0.17 | 0.37 | 0.11 | 0.32 | -2.31 | 0.02 |
| Age, mean | 49.21 | 10.68 | 52.60 | 10.80 | 45.35 | 9.15 | 10.48 | < 0.01 |
| Age by group | | | | | | | | |
| 20–29 years | 0.02 | 0.13 | 0.01 | 0.09 | 0.03 | 0.16 | | < 0.01 |
| 30–39 years | 0.20 | 0.40 | 0.13 | 0.34 | 0.27 | 0.45 | | |
| 40–49 years | 0.30 | 0.46 | 0.25 | 0.43 | 0.37 | 0.48 | | |
| 50–59 years | 0.30 | 0.46 | 0.33 | 0.47 | 0.26 | 0.44 | | |
| ≥ 60 years | 0.19 | 0.39 | 0.29 | 0.45 | 0.07 | 0.26 | | |
| Male (reference: female) | 0.54 | 0.50 | | | | | | |
| Population at practice location | | | | | | | | |
| Large (≥ 100 000) | 0.72 | 0.45 | 0.70 | 0.46 | 0.74 | 0.44 | | 0.27 |
| Medium (30 000–99 999) | 0.14 | 0.35 | 0.15 | 0.36 | 0.14 | 0.35 | | |
| Small (1000–29 999) | 0.14 | 0.35 | 0.16 | 0.36 | 0.12 | 0.33 | | |
| Level of confidence in business knowledge and skills (scale of 1–5), mean | | | | | | | | |
| Project management | 3.44 | 1.07 | 3.54 | 1.01 | 3.32 | 1.12 | -2.89 | < 0.01 |
| Organizational Business/ethics | 3.97 | 0.95 | 4.01 | 0.91 | 3.92 | 0.99 | -1.34 | 0.18 |
| Evidence-based practice | 3.93 | 0.95 | 4.01 | 0.92 | 3.84 | 0.97 | -2.67 | 0.01 |
| Critical thinking and analysis | 3.95 | 0.95 | 3.98 | 0.95 | 3.91 | 0.95 | -1.05 | 0.29 |
| Outcomes management | 3.53 | 1.02 | 3.64 | 1.00 | 3.40 | 1.04 | -3.40 | < 0.01 |

| | | | | | | | | |
|---|------|------|------|------|------|------|-------|--------|
| Mean confidence in business knowledge and skills (composite score of individual skills) | 3.76 | 0.82 | 3.84 | 0.04 | 3.67 | 0.04 | -2.91 | < 0.01 |
| Career aspect enjoyed most (reference: do not enjoy given aspect but enjoy 1 or more other aspects) | | | | | | | | |
| Ability of secure part-time work | 0.35 | 0.48 | 0.24 | 0.43 | 0.47 | 0.50 | 7.26 | < 0.01 |
| Parental leave | 0.11 | 0.31 | 0.05 | 0.21 | 0.19 | 0.39 | 6.46 | < 0.01 |
| Financial reward | 0.79 | 0.41 | 0.79 | 0.41 | 0.79 | 0.41 | 0.03 | 0.97 |
| Managing others | 0.21 | 0.41 | 0.21 | 0.41 | 0.22 | 0.41 | 0.13 | 0.89 |
| Structured/predictable schedule | 0.64 | 0.48 | 0.63 | 0.48 | 0.64 | 0.48 | 0.39 | 0.70 |
| Marital status | | | | | | | | 0.01 |
| Single (reference group) | 0.06 | 0.23 | 0.08 | 0.26 | 0.04 | 0.19 | | |
| Non-married relationship | 0.05 | 0.22 | 0.07 | 0.25 | 0.03 | 0.18 | | |
| Married | 0.84 | 0.37 | 0.80 | 0.40 | 0.87 | 0.34 | | |
| Divorced/separated | 0.06 | 0.23 | 0.06 | 0.23 | 0.06 | 0.24 | | |
| Children | | | | | | | | |
| 1 or more (reference: no children) | 0.83 | 0.37 | 0.88 | 0.32 | 0.78 | 0.42 | -4.01 | < 0.01 |
| 1 or more children by age group | | | | | | | | < 0.01 |
| 0 children (reference group) | 0.17 | 0.37 | 0.12 | 0.32 | 0.22 | 0.42 | | |
| 0-3 years | 0.14 | 0.34 | 0.11 | 0.32 | 0.17 | 0.37 | | |
| 4-7 years | 0.10 | 0.30 | 0.08 | 0.27 | 0.12 | 0.33 | | |
| 8-12 years | 0.11 | 0.31 | 0.10 | 0.30 | 0.12 | 0.33 | | |
| ≥ 13 years | 0.49 | 0.50 | 0.59 | 0.49 | 0.37 | 0.48 | | |
| Primary caregiver role | | | | | | | | < 0.01 |
| Self | 0.15 | 0.36 | 0.08 | 0.27 | 0.24 | 0.43 | | |
| Spouse/partner | 0.22 | 0.42 | 0.34 | 0.47 | 0.07 | 0.26 | | |
| Evenly shared with spouse/partner | 0.39 | 0.49 | 0.30 | 0.46 | 0.50 | 0.50 | | |
| Other (e.g., paid support, older children not requiring caregiver) | 0.24 | 0.43 | 0.28 | 0.45 | 0.18 | 0.39 | | |
| Responsibility for household chores | | | | | | | | < 0.01 |
| Self | 0.25 | 0.43 | 0.10 | 0.30 | 0.41 | 0.49 | | |
| Spouse/partner | 0.25 | 0.43 | 0.39 | 0.49 | 0.09 | 0.28 | | |
| Evenly shared with spouse/partner | 0.41 | 0.49 | 0.43 | 0.50 | 0.38 | 0.49 | | |
| Paid support | 0.09 | 0.29 | 0.08 | 0.27 | 0.11 | 0.31 | | |
| Perception of significant concessions in career to pursue family life (scale of 1-5), mean | 2.38 | 1.26 | 2.04 | 1.09 | 2.78 | 1.34 | 8.64 | < 0.01 |
| Perception that partner made significant concessions in their career to aid in (self's) career (scale of 1-5), mean | 2.50 | 1.37 | 2.71 | 1.39 | 2.24 | 1.30 | -4.86 | < 0.01 |

* Testing the hypothesis that men and women differ significantly against the null hypothesis that difference in mean (female) - mean (male) = 0.

† Comparisons by χ^2 for categorical and *t* test for continuous and binary variables.

Table 2: Results of univariate and multivariate ordinary least squares (OLS) regression analysis with robust standard errors outlining factors that predict weekly work hours among Ontario dentists.

| Characteristic | Univariate regression | | Multivariate OLS regression (n = 645) | |
|---|----------------------------|---------|---------------------------------------|---------|
| | Coefficient (95% CI) | p | Coefficient (95% CI) | p |
| Gender (reference: female) | | | | |
| Male | 2.067 (0.758, 3.376) | < 0.001 | 2.715 (0.988, 4.443) | 0.002 |
| Age (reference: ≥ 60 years) | | | | |
| 20–29 years | 4.578 (–0.447, 9.602) | 0.074 | 10.701 (1.892, 19.511) | 0.017 |
| 30–39 years | 5.257 (2.988, 7.526) | < 0.001 | 8.662 (4.834, 12.490) | < 0.001 |
| 40–49 years | 3.780 (1.706, 5.855) | < 0.001 | 3.708 (0.687, 6.729) | 0.016 |
| 50–59 years | 3.964 (1.892, 6.035) | < 0.001 | 3.015 (0.652, 5.377) | 0.012 |
| Ownership status (reference: associate) | | | | |
| Practice owner, sole or partnership | 7.340 (5.742, 8.937) | < 0.001 | 7.798 (5.964, 9.633) | < 0.001 |
| 1 or more children by age group (reference: no children) | | | | |
| 0–3 years | –2.387 (–4.782, 0.008) | 0.051 | –6.668 (–12.552, –0.784) | 0.026 |
| 4–7 years | –0.492 (–2.884, 1.900) | 0.687 | –4.054 (–9.798, 1.690) | 0.166 |
| 8–12 years | –0.841 (–3.260, 1.578) | 0.495 | –4.123 (–9.765, 1.519) | 0.152 |
| ≥ 13 years | –2.438 (–4.243, –0.634) | 0.008 | –2.810 (–8.158, 2.538) | 0.303 |
| Marital status (reference: single) | | | | |
| Non-married relationship | –2.921 (–6.803, 0.962) | 0.140 | –3.308 (–8.745, 2.128) | 0.233 |
| Married | –3.770 (–6.676, –0.865) | 0.011 | –5.551 (–10.175, –0.927) | 0.019 |
| Divorced/separated | –3.876 (–7.335, –0.418) | 0.028 | –2.642 (–7.881, 2.596) | 0.322 |
| Dental training (reference: internationally trained) | | | | |
| Canadian-trained | –2.221 (–3.842, –0.601) | 0.007 | –2.998 (–4.780, –1.217) | 0.001 |
| Responsibility for household chores (reference: self) | | | | |
| Spouse/partner | 4.064 (2.167, 5.961) | < 0.001 | 3.781 (1.226, 6.335) | 0.004 |
| Evenly split with spouse/partner | 2.549 (0.905, 4.193) | 0.002 | 3.484 (1.318, 5.651) | 0.002 |
| Paid support | 1.077 (–1.577, 3.732) | 0.426 | 1.948 (–0.941, 4.837) | 0.186 |

| | | | | |
|--|--------------------------|---------|---------------------------|-------|
| Other | 7.867 (1.590, 14.144) | 0.014 | 5.989 (-1.007, 12.984) | 0.093 |
| Role as primary caregiver (reference: self) | | | | |
| Spouse/partner | 7.593 (5.166, 10.021) | < 0.001 | 3.412 (0.807, 6.017) | 0.010 |
| Evenly shared with spouse/partner | 3.709 (1.434, 5.984) | 0.001 | 1.904 (-0.411, 4.220) | 0.107 |
| Other (e.g., paid support, older children not requiring caregiver) | 1.436 (-1.155, 4.027) | 0.277 | 0.396 (-2.473, 3.264) | 0.787 |
| Adjusted R² | | | 0.2484 | |

Note: CI = confidence interval.

Discussion

Among this sample of Ontario dentists, women worked, on average, 2 fewer hours a week than men, which may have few implications. Apart from the current maldistribution of dentists between urban and rural areas, there is arguably no shortage of dentists in Ontario as a whole. Over the past decade, that number has increased by 37%, while the dentist-to-population ratio has decreased by 16%.¹⁶ Although not a robust measure of labour supply, the dentist-to-population ratio is expected to continue to drop and potentially compound itself beyond 2020.¹⁶ Likewise, the time dentists spend per patient has also increased by 20% over the past decade.¹⁶ From 2009 to 2013, new registration as dentists by Canadian dental graduates was also up by 7% and by 159% for internationally trained dentists in the same period.^{17,18} In short, an under-supply of dentists is not expected.

More important, our findings indicate differences in expectations, career goals and practice patterns between male and female dentists. For example, the greater preference of women for part-time work may be a surrogate for other differences between male and female practitioners, including familial relationships, career planning and institutional obstacles. It would appear that the discrepancy in the number of work hours between male and female dentists can be attributed, at least in part, to the degree of partner support for family responsibilities, including child care and household chores. Other reports, for example, have documented that 86% of female physicians' partners were employed full time versus 45% of male physicians' partners and that the latter were 4 times more likely to be employed part time or not employed outside the home.¹⁹ The same study demonstrated that female physicians devoted over 8 h/week to domestic duties compared with their male colleagues. In fact, many of the findings of our survey regarding part-time work, the mitigating role

of spousal support and institutional and personal factors influencing work-life balance are corroborated in the literature exploring gender differences in work outcomes among physicians.¹⁹⁻²²

Yet, although much of the currently available data on career preferences and patterns is from surveys of female physicians, the dental profession is quite different from the medical profession in its organizational structure. With most dentists working independently as entrepreneurs, fewer system-level issues may be affecting women's practice patterns. In dentistry, outcomes related to fairness of income, flexibility within an organization, mentorship, promotion and academic productivity may be more apparent at the specialty, hospital and academic level than in private practice. In private practice, relevant issues may be burnout, changing attitudes toward work-life balance and potential loss of autonomy as practice ownership is associated with longer work hours. With women reporting marginally less confidence in their business acumen, combined with greater domestic responsibility, it is not surprising that women are more likely to work in associate positions. Moreover, the dental curriculum is largely devoid of business training, which is negative for all dentists. Knowledge of business practices is thus typically acquired through self-learning or mentorship. With the increasing presence of women in the profession, incorporating business training in the dental curriculum or providing it after graduation through professional bodies should be encouraged, which, in turn, would be a positive development for all dentists.

The additional hours worked by internationally trained dentists may be explained by increased debt loads associated with such training, although this does not account for the increased work hours in women only. As internationally trained dentists who complete qualifying programs (at Canadian universities) tend to be older when they

Table 3: Results of multivariate robust regression analyses identifying factors that predict weekly work hours among Ontario dentists using overall and gender-stratified modeling.

| Factor | All dentists (n = 771) | | All dentists (controlling for caregiver role, n = 645) | | Male dentists (n = 364) | | Female dentists (n = 281) | |
|---|----------------------------|---------|--|---------|----------------------------|---------|----------------------------|---------|
| | Coefficient (95% CI) | p | Coefficient (95% CI) | p | Coefficient (95% CI) | p | Coefficient (95% CI) | p |
| Gender (reference: female) | | | | | | | | |
| Male | 2.569 (1.192, 3.946) | < 0.001 | 2.811 (1.183, 4.440) | 0.001 | | | | |
| Age (reference: ≥ 60 years) | | | | | | | | |
| 20–29 years | 13.898 (8.935, 18.862) | < 0.001 | 11.928 (3.243, 20.613) | 0.007 | 16.460 (-0.040, 32.960) | 0.051 | 10.955 (-0.427, 22.337) | 0.059 |
| 30–39 years | 10.568 (7.991, 13.145) | < 0.001 | 8.556 (5.141, 11.971) | < 0.001 | 11.597 (6.810, 16.383) | < 0.001 | 6.790 (0.984, 12.596) | 0.022 |
| 40–49 years | 5.304 (3.197, 7.411) | < 0.001 | 4.333 (1.735, 6.930) | 0.001 | 4.860 (1.267, 8.452) | 0.008 | 4.165 (-0.650, 8.979) | 0.090 |
| 50–59 years | 4.971 (3.200, 6.741) | < 0.001 | 4.362 (2.340, 6.385) | < 0.001 | 4.210 (1.827, 6.594) | 0.001 | 4.643 (0.052, 9.234) | 0.047 |
| Ownership status (reference: associate) | | | | | | | | |
| Practice owner (sole or partnership) | 8.203 (6.724, 9.683) | < 0.001 | 8.233 (6.506, 9.960) | < 0.001 | 8.057 (5.495, 10.619) | < 0.001 | 8.262 (5.729, 10.795) | < 0.001 |
| 1 or more children by age group (reference: no children) | | | | | | | | |
| 0–3 years | -3.439 (-5.818, -1.060) | 0.005 | -4.517 (-9.929, 0.895) | 0.102 | -3.822 (-11.149, 3.505) | 0.306 | -3.604 (-12.504, 5.297) | 0.426 |
| 4–7 years | -0.466 (-2.938, 2.006) | 0.711 | -2.153 (-7.396, 3.090) | 0.420 | 0.395 (-6.767, 7.558) | 0.914 | -2.419 (-11.075, 6.237) | 0.583 |
| 8–12 years | -1.234 (-3.786, 1.318) | 0.343 | -2.924 (-8.107, 2.260) | 0.268 | -0.804 (-7.908, 6.299) | 0.824 | -3.469 (-11.970, 5.031) | 0.422 |
| ≥ 13 years | -0.224 (-2.362, 1.915) | 0.837 | -2.131 (-6.904, 2.641) | 0.381 | -0.363 (-6.827, 6.101) | 0.912 | -2.330 (-10.257, 5.598) | 0.563 |
| Marital status (reference: single) | | | | | | | | |
| Non-married relationship | -1.921 (-5.703, 1.861) | 0.319 | -3.238 (-10.042, 3.566) | 0.350 | 2.986 (-9.992, 15.964) | 0.651 | -4.403 (-14.109, 5.302) | 0.372 |
| Married | -4.327 (-7.442, -1.212) | 0.007 | -5.294 (-10.795, 0.207) | 0.059 | 2.204 (-9.830, 14.238) | 0.719 | -6.405 (-13.084, 0.274) | 0.060 |
| Divorced/separated | -2.714 (-6.399, 0.970) | 0.149 | -2.561 (-8.593, 3.471) | 0.405 | 4.895 (-7.603, 17.393) | 0.442 | -4.845 (-12.863, 3.172) | 0.235 |

| | | | | | | | | |
|---|----------------------------|---------|----------------------------|---------|---------------------------|-------|----------------------------|-------|
| Dental training (reference: internationally trained) | | | | | | | | |
| Canadian-trained | -2.467 (-3.961, -0.974) | 0.001 | -3.013 (-4.671, -1.354) | < 0.001 | -1.507 (-4.137, 1.123) | 0.261 | -3.778 (-6.122, -1.434) | 0.002 |
| Responsibility for household chores (reference: self) | | | | | | | | |
| Spouse/partner | 3.917 (1.858, 5.976) | < 0.001 | 2.708 (0.246, 5.171) | 0.031 | 0.339 (-4.030, 4.709) | 0.879 | 4.578 (-0.122, 9.277) | 0.056 |
| Evenly split with spouse/ partner | 2.881 (1.142, 4.621) | 0.001 | 2.473 (0.420, 4.526) | 0.018 | 0.065 (-4.164, 4.295) | 0.976 | 2.683 (0.046, 5.320) | 0.046 |
| Paid support | 1.994 (-0.382, 4.369) | 0.100 | 1.924 (-0.644, 4.492) | 0.142 | 1.689 (-3.167, 6.545) | 0.494 | 1.190 (-2.224, 4.605) | 0.493 |
| Other | 5.608 (-0.516, 11.732) | 0.073 | 4.110 (-4.113, 12.333) | 0.327 | 0.140 (-16.372, 6.653) | 0.987 | 5.772 (-4.323, 15.866) | 0.261 |
| Primary caregiver (reference: self) | | | | | | | | |
| Spouse/partner | | | 3.968 (1.433, 6.503) | 0.002 | 2.379 (-1.347, 6.105) | 0.210 | 6.720 (1.819, 11.621) | 0.007 |
| Evenly shared with spouse/partner | | | 2.365 (0.258, 4.471) | 0.028 | 1.308 (-2.342, 4.958) | 0.481 | 2.534 (-0.275, 5.344) | 0.077 |
| Other (e.g. paid support, older children not requiring caregiver) | | | 2.314 (-0.036, 4.664) | 0.054 | 2.015 (-1.608, 5.638) | 0.275 | 2.158 (-1.378, 5.694) | 0.230 |
| R² | 0.20076978 | | 0.21433043 | | 0.14690001 | | 0.24262725 | |

Note: CI = confidence interval.

graduate than domestically trained dentists, it is plausible that their children would fall into an older age bracket. This may result in a greater likelihood of these dentists working more hours a week.

Limitations to this study include the sampling strategy, i.e., the initial stratification of the sample into men and women was based on the dentist's name, making it inexact. A second and more substantive limitation was the small sample size, which gives rise to the possibility of non-response bias. However, the results of our study are similar to statistics published by the Ontario Dental Association, which provides some confidence that they may be generalized to the broader Ontario dentist population.²³

Based on our findings, female dentists' preference for or obligation to work fewer hours than men is largely a function of domestic responsibilities. Although the practice

patterns, preferences and expectations of female dentists may differ from those of men, the impact of such differences on the provision of care is unknown and requires further analysis. Strategies to improve business training and the balancing of work-life responsibilities should be considered in the curriculum of future cohorts. Likewise, policies to advance training and interest in academia and leadership in female dentists may prove to be equally important.

Conclusion

Gender, age, ownership status, training location and degree of spousal support for household and caregiving responsibilities were found to be predictors of the number of hours worked per week in this sample of Ontario dentists. For women specifically, training location and household and caregiving responsibilities predicted work hours.

THE AUTHORS



Dr. McKay is an oral and maxillofacial surgeon resident at the Montefiore Medical Center, department of dentistry, New York City, New York.



Dr. Ahmad is in private practice in Barrie, Ontario.



Dr. Shaw is director of dental services 2 policy and programs, Canadian Forces Health Services Group Headquarters, Department of National Defence, Ottawa, Ontario.



Dr. Rashid is a dental consultant with Peel Public Health, Mississauga, Ontario.



Dr. Clancy is in private practice in Whitby, Ontario.



Dr. David is a general practice resident at the University of Alberta faculty of dentistry, Edmonton, Alberta.



Dr. Figueiredo is provincial dental public health officer, Alberta Health Services, Edmonton, Alberta



Dr. Quiñonez is associate professor and program director, discipline of dental public health, faculty of dentistry, University of Toronto, Toronto, Ontario.

Correspondence to: Dr. Carlos R. Quiñonez, Faculty of Dentistry, University of Toronto, 521-124 Edward St., Toronto ON M5G 1G6. Email: carlos.quinonez@utoronto.ca

Acknowledgement: Sources of support: Dental Research Institute, faculty of dentistry, University of Toronto, Toronto, Ontario.

References

1. Abate R. A demographic update for Ontario: population and dental professionals. *Ont Dent*. 2011;88(5):38-43.
2. McKay JC, Quiñonez CR. The feminization of dentistry: implications for the profession. *J Can Dent Assoc*. 2012;78:c1.
3. Ayers KM, Thomson WM, Rich AM, Newton JT. Gender differences in dentists' working practices and job satisfaction. *J Dent*. 2008;36(5):343-50.
4. Adams TL. Feminization of professions: the case of women in dentistry. *Can J Sociology*. 2005;30(1):71-94.
5. Seward M. Better opportunities for women dentists: a review of the contribution of women dentists to the workforce. London: Department of Health; 2001.
6. Riley JL 3rd, Gordan VV, Rouisse KM, McClelland J, Gilbert GH, Dental Practice-Based Research Network Collaborative Group. Differences in male and female dentists' practice patterns regarding diagnosis and treatment of dental caries: findings from the Dental Practice-Based Research Network. *J Am Dent Assoc*. 2011;142(4):429-40.
7. Atchison KA, Bibb CA, Lefever KH, Mito RS, Lin S, Engelhardt R. Gender differences in career and practice patterns of PGD-trained dentists. *J Dent Educ*. 2002;66(12):1358-67.
8. Caniano DA, Sonnino RE, Paolo AM. Keys to career satisfaction: insights from a survey of women pediatric surgeons. *J Pediatr Surg*. 2004;39(6):984-90.
9. Verlander G. Female physicians: balancing career and family. *Acad Psychiatry*. 2004;28(4):331-6.
10. Buddeberg-Fischer B, Stamm M, Buddeberg C, Bauer G, Häemmig O, Knecht M, et al. The impact of gender and parenthood on physicians' careers — professional and personal situation seven years after graduation. *BMC Health Serv Res*. 2010;10:40.
11. Murray JJ. Better opportunities for women dentists: a review of the contribution of women dentists to the workforce. *Br Dent J*. 2002;192(4):191-6.
12. Walton SM, Byck GR, Cooksey JA, Kaste LM. Assessing differences in hours worked between male and female dentists: an analysis of cross-sectional national survey data from 1979 through 1999. *J Am Dent Assoc*. 2004;135(5):637-45.
13. RCDSO 2010 report: distribution of dentists. Toronto: Royal College of Dental Surgeons of Ontario; 2010. pp. 32-33. Available: http://www.rcdso.org/Assets/DOCUMENTS/Annual_Reports/RCDSO_Annual_2010.pdf
14. 2006 census highlights: factsheet 11. Ethnic origin and visible minorities. Toronto: Ministry of Finance, Government of Ontario; 2006. Available: <http://www.fin.gov.on.ca/en/economy/demographics/census/cenhi06-11.html>
15. Dillman DA. *Mail and internet surveys: the tailored design method*. 2nd ed. Hoboken, N.J.: John Wiley & Sons Inc.; 2007.
16. Economic report to the dental profession. Caledon, Ont.: R.K. House & Associates Ltd; 2013.
17. Annual report 2009: challenges and achievements. Toronto: Royal College of Dental Surgeons of Ontario; 2009. Available: http://www.rcdso.org/Assets/DOCUMENTS/Annual_Reports/RCDSO_Annual_2009.pdf
18. Effective regulator in the public's interest: annual report 2013. Toronto: Royal College of Dental Surgeons of Ontario; 2013. Available: http://www.rcdso.org/Assets/DOCUMENTS/Annual_Reports/RCDSO_Annual_2013.pdf
19. Jolly S, Griffith KA, DeCastro R, Stewart A, Ubel P, Jagsi R. Gender differences in time spent on parenting and domestic responsibilities by high-achieving young physician-researchers. *Ann Intern Med*. 2014;160(5):344-53.

20. McMurray JE, Linzer M, Konrad TR, Douglas J, Shugerman R, Nelson K. The work lives of women physicians: results from the physician work life study. The SGIM Career Satisfaction Study Group. *J Gen Intern Med*. 2000;15(6):372-80.
21. Rizvi R, Raymer L, Kunik M, Fisher J. Facets of career satisfaction for women physicians in the United States: a systematic review. *Women Health*. 2012;52(4):403-21.
22. Heiliger PJ, Hingstman L. Career preferences and the work-family balance in medicine: gender differences among medical specialists. *Soc Sci Med*. 2000;50(9):1235-46.
23. Abate R. Preparing for the future of dental care in Ontario: the impact of population and dental professional demographic changes. *Ont Dent*. 2014;91(1):18-20.