Original Article

Influence of gender on office staff management in orthodontics

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ABSTRACT

Objective: To examine the gender differences in managing practice and staff members in orthodontic practices.

Materials and Methods: All orthodontists in Virginia and Maryland (n = 427) were surveyed and demographic information was collected. For the crude analyses of the data, a Fisher's exact test or χ^2 test was performed. For the adjusted analyses, genders were compared using a logistic regression or analysis of covariance. The covariates were adjusted for age, program length, years in practice, number of years since graduation, and practice state.

Results: The length of the residency program attended did not differ with gender. No gender differences in practice ownership or creating the practice were observed. There was a significant gender difference in implementation of performance reviews: female orthodontists were more likely to provide performance reviews and tended to accept more poor reviews before staff termination than male orthodontists. However, when provided, no gender difference was observed in the number of performance reviews.

Conclusion: Gender has a significant impact on the implementation of performance reviews in practices. Practice ownership status was not influenced by providers' gender. (*Angle Orthod.* 2010;80:1150–1154.)

KEY WORDS: Gender; Practice management

INTRODUCTION

For the past 25 years, the number of women entering the dental profession has steadily increased, affording female practitioners the opportunity to play an important role in the current dental workforce.¹ Surveys performed in the United Kingdom have shown that 88% of women dentists are actively involved in the clinical practice of dentistry. Half of these women reported practicing full time and half reported practicing part time to accommodate caring for children.² Similar trends have been reported in the United States, where the enrollment of women in dental schools has been rising for two decades.^{1,3} Recent studies have documented that the orthodontic workforce has also been affected by this gender trend, and in the United Kingdom, 31.4% of all orthodontists are women.¹ A socalled feminization of the orthodontic workforce has been reported.¹

Most studies evaluating gender differences in dentistry have examined differences in working patterns, including numbers of hours worked, time taken off, days worked per year, practice ownership status, number of patients treated, and income. For the most part, these studies have found that women are less likely to own their own practices,^{3,4} work fewer hours^{5–10} and fewer days, take more time off,3 see fewer patients,^{4,7,9} and earn the same amount as their male counterparts per day worked.⁵ It was also found that a greater percentage of female dentists than male dentists work part time.^{5,10,11} However, this was related to female dentists having children and choosing to work part time while raising their children at home.^{5,11} Because of the increasing numbers of women in dentistry and their current work pattern, there is a need to reassess previous projections of dentist supply.^{2,6,10} It is estimated that as women replace men in the orthodontic workforce, 17% more orthodontists will be

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needed to achieve the current output, assuming that current working patterns are maintained in the future.¹ Otherwise, the current workforce will need to find new ways to meet this increased demand.¹

It is clear that certain gender differences exist in career development, opportunities, and practice and work patterns between male and female dentists. Gender differences likely also influence practice and staff management. It could prove to be beneficial and helpful to identify these differences and their potential impact on the practice of dentistry for the next generation of patients and dental providers. The purpose of this study was to examine the differences between male and female orthodontists' approach to the management of their practice and staff members.

MATERIALS AND METHODS

A survey was mailed to all orthodontists practicing in Virginia and Maryland (n = 427) to collect the data for this study. The list of orthodontists was obtained from the American Association of Orthodontists and represented the most recent and accurate available list of practicing orthodontists within those states. The study was approved by the Virginia Commonwealth University Institutional Review Board for Human Research Protection. The survey was anonymous and voluntary, and all answers were kept confidential. The survey consisted of 35 questions, which covered such topics as demographics; general information about current staff; benefits offered to staff members; and practices related to hiring, training, evaluating, and terminating staff members.

Instructions were provided at the top of each section of questions within the survey. All surveys were mailed by a third party to maintain confidentiality. Each survey packet included the survey, a cover letter stating the intent of the study, and a stamped return envelope. All answers were mailed back to the principal investigator in the envelope that was included with the survey. After 4 weeks, the third-party mailing center was notified and a second survey was sent to any nonrespondents.

The female and male groups were summarized by frequencies (percentages), means and standard deviations, as appropriate. For the crude analyses, the nominal responses were compared with a Fisher's exact test or a χ^2 test. Continuous measures were compared using a *t*-test. For the adjusted analyses, the genders were compared using a logistic regression or analysis of covariance. In both of these cases of adjusted analysis, the covariates adjusted for all the demographic characteristics are indicated in Table 1 (age, program length, years in practice, years since graduation, and practice state).

Table 1. Demographic Information ^a	
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Gender	n (%)	Mean	SD	P Value*					
	Age (years)								
F	48 (29%)	43.35	7.83	<.0001					
Μ	115 (71%)	51.00	51.00 10.74						
	P	Program length (months)							
F	46 (29%)	27.43	5.39	.0360					
Μ	111 (71%)	25.23	5.25						
	Years in practice								
F	46 (28%)	11.87	6.87	<.0001					
Μ	119 (72%)	20.50	11.69						
	Ň	Years since graduation							
F	47 (28%)	12.68	6.72	.0002					
Μ	120 (72%)	16.93	6.50						
	Surve	Survey sent to those practicing in:							
	Maryland	Virginia	Total	P Value*					
F	56 (29%)	53 (22%)		.0957					
Μ	134 (71%)	184 (78%)							
Total	190	237	427						
	Respon	Responses as a % of those survey							
F	28 (50%)	20 (38%)		.0036					
Μ	36 (27%)	84 (46%)							
Total	64	104	168						

^a SD indicates standard deviation; F, female; M, male.

* *P* values compare the genders using a *t*-test for the mean response or a Fisher's exact test for the percentages of those surveyed. The last *P* value tested the percentages responding across the four cross-classifications of gender and state using logistic regression.

RESULTS

The survey was sent out to 427 orthodontists in the Virginia-Maryland region (Table 1). The survey was only sent to currently practicing orthodontists, leaving out all orthodontists who were retired or not practicing. The percentage of female practitioners in the two states was not significantly different (29% in Maryland versus 22% in Virginia; Fisher's exact; P = .096). Overall, 168 orthodontists (39%) responded with completed surveys. The response rate varied by state and gender (χ^2 ; P = .0036). Those with the highest response rate (47%) were males in Virginia or females in Maryland (112/240). Those with a lower response rate (30%) were females in Virginia or males in Maryland (56/187). There were 48 females (29%) among the respondents, and this was not significantly different from the percentage of females who were invited to participate (P > .9).

The main comparisons of this study were between the female and male providers. Overall, male respondents to the survey were older (mean age = 51 years; mean years in practice = 20.5 years) and were in practice longer than their female counterparts (mean age = 43 years; mean years in practice = 11.9). Accordingly, male respondents indicated more years since graduation (17 years) compared with females

	Crude Analysis			Adjusted Analysis					
Gender	Y	Ν	%Y	OR	P Value*	%Y	OR	95% CI	P Value
					Do you own	your own prac	tice?		
F	40	8	83.3	0.27	.0200	87.8	0.38	(0.11, 1.30)	.1230
M	113	6	95.0			95.0			
Total	153	14	91.6						
					If yes, die	d you create it	?		
F	18	19	48.6	1.37	.4119	53.0	0.93	(0.39, 2.20)	.8643
M	45	65	40.9			47.6			
Total	63	84	42.9						
				Do you p	rovide performa	nce reviews fo	r staff memb	ers?	
F	42	4	91.3	3.82	.0071	94.5	5.03	(1.47, 21.8)	.0088
M	88	32	73.3			78.3			
Total	130	36	78.3						
			If Yes, how many performance reviews per year?						
	n	Mean	SD		P Value	Estimate	SE	95% CI	P Value
Total	44	1.727	1.042			1.746	0.143	(1.46, 2.03)	
Μ	87	1.437	0.872			1.511	0.110	(1.29, 1.73)	
Difference		0.290			.0945	0.236	0.190	(-0.14, 0.61)	.2164
			How m	nany poor r	eviews would yo	ou allow before	considering	termination?	
F	44	2.659	1.010		-	2.652	0.138	(2.38, 2.92)	
M	97	2.247	0.791			2.200	0.100	(2.00, 2.40)	
Difference		0.412			.0098	0.452	0.178	(0.10, 0.80)	.0122

 Table 2.
 Ownership and Performance Review^a

^a F indicates female; M, male; Y, number "yes"; N, number "no"; %Y, percent "yes"; OR, odds ratio (Y versus N in F versus M); CI, confidence interval; SD, standard deviation; Estimate, least-squares estimated mean; SE, standard error of the estimate.

* For the crude analyses, *P* values compare the genders using a *t*-test for the mean response or a Fisher's exact test for the percentage "yes." For the adjusted analyses, the *P* value compares the genders using a logistic regression or analysis of covariance. In both of these cases of adjusted analysis, the covariates adjust for all the demographic characteristics indicated in Table 1 (age, program length, years in practice, years since graduation, and practice state).

(13 years since graduation). On average, males were more likely to be graduates of 2-year programs (25 months) and females were more likely to graduate from longer programs (27 months) (Table 1). However, after adjusting for all other characteristics listed in Table 1, there was no significant difference between males and females on the length of the program they chose to attend (P = .1657).

The primary aim of the study was to identify practice differences related to gender. A male practitioner was more likely to own his practice (95%) than a female was (83%; P = .02) This is indicated in the crude analysis shown in the first rows of Table 2. The crude odds of owning one's own practice was 0.27 times as likely in females versus males. However, as the results in Table 1 indicated, there were differences between males and females on all of the demographics and in the practice state. Accordingly, analyses comparing males and females were performed using an adjusted analysis (adjusting for age, program length, years in practice, years since graduation, and practice state). The practical interpretation of the adjusted analysis was that outcome variables were estimated separately for Virginia and Maryland for an average-age practitioner (49 years), who had been in an average program (26 months), had practiced an average of 18 years, and was approximately 18 years from graduation. This had the effect of adjusting for experience differences and comparing male and females on an equal footing. As the adjusted analysis for ownership indicates, the adjusted odds of owning one's own practice was 0.38 times as likely in females versus males but this odds ratio was not significantly different (P = .12, 95% CI = 0.11–1.30).

For those who were owners, there was no significant difference between males and females in terms of creating their own practice (overall %Yes = 43), in either the crude or adjusted analysis (P = .4, and .8, respectively, Table 2). Additionally, there was no difference between males and females in the percentage who were an associate (Yes = 63%).

The implementation of performance review showed significant differences between male and female orthodontists (Table 2). The study showed that females were more likely to provide performance reviews to their staff than males (P = .0088). The adjusted analysis indicated that 95% of the females and 78% of the males provided performance reviews. That is, the odds of a staff member having performance reviews in a female practice was much more

likely than in a male practice (OR = 5, 95% CI = 1.5– 21.8). When provided, the number of performance reviews did not differ between female and male practices (Table 2). However, females were willing to accept more poor performance reviews before terminating a staff member than males were (P = .0122). The adjusted analysis indicated that females allowed approximately 2.7 poor reviews before termination and males allowed 2.2 poor.

There was no significant difference in the total number of staff, number of women, number of men, and number of full-time or part-time staff members between male and female orthodontists (P > .2).

DISCUSSION

The results from this study document an area of practice management in orthodontics that has little information available to date. The survey was mailed to all practicing orthodontists in Maryland and Virginia and the response rate was 39% after two mailings. The second mailing targeted nonrespondents through a coding on the return envelope known only to the thirdparty survey mailing service to keep the results anonymous.

The demographic analysis showed that practicing female orthodontists were on average younger than male orthodontists, which is to be expected because of the recent and well-documented influx of women in the dental profession and orthodontic specialty.^{12–15} For similar reasons, females have been in practice for fewer years, and they are more recent graduates than their male counterparts. Females attended slightly longer residency programs than males did, and after adjusting for age, years in practice, and years since graduation, the gender difference was not significant.

The proportion of female orthodontists practicing was higher in Maryland than in Virginia, whereas a greater proportion of male orthodontists were practicing in Virginia compared with Maryland. The lengths of the orthodontic programs in Virginia and Maryland are different; Virginia offers a shorter orthodontic residency program, which may contribute to attracting a different proportion of male and female candidates in those residency programs and potentially affects the characteristics of future providers in those states.

No gender difference in practice ownership was reported in our study. The results of this study concerning the practice ownership differences between males and females were not in agreement with previous studies that have found that females are less likely to own their practice.^{3,4,6,13} Female orthodontists who responded to our survey were younger practitioners, were more recent graduates, and may have been more inclined (by desire for ownership or opportunity for ownership) to own a practice than previous generations of female clinicians. Furthermore, for those who owned their practice, there was no gender differences in terms of creating their practices. For those who were not owners, there was no gender difference in being an associate. These findings did not agree with the previous literature that supported that females were more often practicing in group settings or associateships.^{2–6,16}

Although no significant differences were found in our study for staff size and composition between male and female practitioners, significant differences were observed in their performance review practices. Females were more likely than males to provide and implement performance reviews, and females allowed more reviews before terminating staff, perhaps allowing additional time for counseling their employees. This finding is in agreement with the fact that female dentists are more likely to befriend their staff and appear to have a greater affective professional commitment than males.9 In the same study, female dentists' behavioral commitment was positively related to their job involvement, office structure, and weekly hours worked. Male dentists associated their affective professional commitment to the productivity of their office and the control of their practices. The current study showed similar trends for female orthodontists, who seemed to be more willing to discuss job performance by implementing performance reviews and providing counseling when the performance was deemed poor before terminating their employees.

This study confirmed the general gender trends that exist in the dental profession regarding practitioner age, years in practice, and staff composition in the specialty of orthodontics. Practice ownership status was not different between genders as previously reported.^{3,4} Another novel finding was related to the attitude of women toward implementing performance evaluation. It seems that after years of belief that women may be shy or hesitant at managing the business aspect of their practices, female orthodontists have demonstrated that they have the talent, the ability, and the desire to manage small businesses such as their practices.

CONCLUSIONS

- There was a gender difference in the implementation of a systematic performance review and in the number of poor reviews accepted by providers before staff termination.
- Practice ownership status was not influenced by gender as previously reported.
- Size and makeup of the staff were not affected by the gender of the orthodontist.

 Recognizing the existence of gender differences in management style may help tailor better practice management curricula in dental schools, where the female population of applicants continues to grow.

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