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# **Comparison of Hiring Strategies of Orthodontic Private Practitioners**

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Dentistry at Virginia Commonwealth University.

By

Steven C. Petritz, D.D.S.

B.S., Management, Purdue University, December 2004

D.D.S., University of California, Los Angeles School of Dentistry, June 2016

Thesis Director: Bhavna Shroff, D.D.S., M.Dent.Sc., M.P.A. Virginia Commonwealth University Department of Orthodontics Program Director

Virginia Commonwealth University Richmond, VA May 2018

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### **ABSTRACT**

# COMPARISON OF HIRING STRATEGIES OF ORTHODONTIC PRIVATE PRACTITIONERS

By Steven C. Petritz, D.D.S.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Dentistry at Virginia Commonwealth University

Virginia Commonwealth University, 2018

Thesis Director: Bhavna Shroff, D.D.S., M.Dent.Sc., M.P.A.

Virginia Commonwealth University Department of Orthodontics Program Director

**Purpose**: Evaluate factors that influence hiring outcomes of clinical and non-clinical staff in orthodontic private practices.

**Methods**: Orthodontists (n=1968) were surveyed regarding their hiring methods and outcomes. Responses were summarized using descriptive statistics. Chi-square tests were used to compare between hiring strategies and outcomes.

**Results**: Survey response rate was 23% (n = 452 responses). 65% received 1-10 applicants and 54% utilized online job sites. Online job sites was associated with increased number of applicants (p<0.0001) and number of days to fill the position (p<0.0001). Forty-seven percent of respondents used the internet to screen candidates. Sixty-two percent of respondents hired based on personality. Fifty-seven percent of respondents plan to use employee referrals for future hiring needs.

**Conclusion**: Online job sites accounted for the majority of the most recent hires. Orthodontists indicated that their future preference to be employee referrals. Social and professional relationships may lead to a more efficient hiring process.

#### **INTRODUCTION**

The success of an organization depends upon the quality of its workforce. Talent management is of increasing importance for organizations across the globe. <sup>1,2</sup> Talent management includes the processes to recruit, select, develop, and retain the best employees in the most strategic roles. <sup>2,3</sup> For large corporate organizations, talent management has evolved into a multibillion-dollar industry, consisting of a national recruitment effort or utilization of external agencies. Small businesses and their effectiveness in talent management have the same goal as larger businesses as they want the opportunity to select the right individual from a qualified pool of candidates. Orthodontic practices, like small businesses, would like to find the top talent that they need to drive their business growth, while reducing talent acquisition time and costs.

In the process of talent acquisition, small businesses have different concerns than those of larger organizations. Small businesses typically operate with a limited number of staff and do not have a dedicated human resources department. Unlike larger organizations with means for a national recruitment effort, small businesses must work around issues regarding access to local and/or regional talent. Because of their small business size, there is a high number of single incumbent jobs, and employees typically have to perform multiple roles. Small businesses may need to acquire additional employees to fuel their growth strategy; however, the human resources function is often underdeveloped. Similar to small businesses, orthodontic practices must utilize underdeveloped human resource management practices to effectively recruit, hire, and retain quality employees in order to meet their strategic goals.

Health care organizations, including orthodontic practices, are not immune to labor market demands and the struggles of effective hiring practices.<sup>5</sup> Direct costs of hiring include efforts for recruiting, interviewing, and training a new or replacement employee. Indirect costs of hiring an unsuitable employee may include detrimental influence on morale, absenteeism, and productivity.<sup>6</sup> In situations in which there is fairly constant turnover or a large number of positions in an occupational category (such as orthodontic assistant), some organizations are using a "just-in-time" approach to recruitment. This tactic involves only recruiting candidates when there is an immediate vacancy. A second tactic is to reduce the elapsed time from recruitment to job offer by streamlining and utilizing online means throughout the process.<sup>5,6</sup> No matter the organization, hiring an unsuitable person can be costly.

Talent management is no longer considered a business component, but rather a core strategic asset for any organization. Within the realm of talent management, employer branding focuses on developing the image of organizations as a potential employer. As defined by Sullivan (2004), employer branding is "a targeted, long-term strategy to manage the awareness and perceptions of employees, potential employees, and related stakeholders..." Evidenced in the Sivertzen *et al* study, there is a clear link between positive corporate reputation and intentions to apply for a job. Building that positive reputation through an online presence and the use of social media can be an effective tool for employer branding and talent management.

The growth of the internet and development of online job sites (Monster, CareerBuilder, Craigslist, indeed) has made it even easier for an orthodontist to advertise job openings. Internet sourcing channels are typically used in addition to traditional newspaper advertisements, employee referrals, or recruitment agencies. <sup>1,9,10</sup> The evolution of the internet, social networking sites, and other digital platforms have shifted talent management toward more innovative means

to attract quality candidates. Digital platforms allow individuals, or orthodontic practices, to post and share a variety of personal and professional information. Merging the human resource function, such as recruiting and social networks has developed into a concept called Social Recruiting. Social Recruiting can be defined as recruiting candidates by using social platforms as talent databases or for advertising open positions. 11 It allows an organization, or orthodontist, to reach into their social and professional networks and recruit within for open positions. US employers are also able to utilize these same social networking sites to screen job applicants.<sup>1</sup> Typically Human Resource professionals and other hiring managers relied on cover letters, resumes, application forms and interviews to initially screen job candidates. However, resumes and cover letters will only highlight a candidate's best possible qualities; application forms and interviews also suffer from impression management attempts. 12-14 Social networking sites as a selection tool have an advantage over traditional human resource tools as an accessible means to corroborate certain background information provided by applicants. <sup>1,15</sup> In today's digital age, applicants should realize that their online persona is as important as their professional persona presented through CVs and interviews.<sup>16</sup>

It is important for orthodontic practices to be educated about hiring methodology and outcome benchmarks. An assessment of orthodontists' hiring methods and outcomes has not been fully investigated in the orthodontic literature. The purpose of this study was to evaluate factors that influence hiring outcomes of clinical and non-clinical staff in orthodontic practices. An examination of the linkages between specific hiring tactics and four hiring outcomes was performed to assess their effectiveness. In specific terms: Does the time to fill a staff vacancy vary among different sourcing methods? The outcomes of this study were: number of applicants per job vacancy, average number of days to fill a vacancy, six-month retention rate for latest new

hire, and overall satisfaction. These outcomes are viewed as part of the hiring process that occurs sequentially over the course of the hiring timeline. Associations between demographics, sourcing, screening, and outcomes were evaluated. By learning the nature of such linkages and outcomes, orthodontists will be able to improve their own hiring methodologies to assist them in meeting their strategic talent management challenges.

### MATERIALS AND METHODS

An original 22-question survey was developed for orthodontists to self-report their hiring methods and outcomes (Appendix 1). The survey consisted of six sections: 1. Demographics of the responding orthodontist; 2. Applicant sourcing methods; 3. Applicant screening methods; 4. Applicant interviewing methods; 5. Hiring outcome measurements; 6. Future hiring considerations. The survey consisted of a series of closed questions, mark all that apply, and an option for free response.

Following approval from the Institutional Review Board (IRB) at Virginia Commonwealth University (HM20009306), the survey was mailed in two rounds, eight weeks apart, to a group of 1,968 (n=1,968) orthodontists in the United States. The mailed surveys included a cover message and business reply envelope enclosed by a third party, the VCU mailing service. The 1,968 orthodontists were randomly selected from all active members of the American Association of Orthodontists. The mailed surveys were assigned numbers only known to the third party so that the second round of surveys were only sent to those who had not yet responded.

Data were collected and recorded without identifiers and then analyzed. Data collection began in May 2017 and continued through September 2017. The returned survey data were entered into REDCap, a browser-based software for electronic data capture. Data were entered by a single individual and ten percent of the data entries were checked by the statistician to ensure accuracy.

## Statistical Analysis

Responses were summarized using descriptive statistics (counts and percentages). Chi-square tests were used to compare among hiring strategies (sourcing, screening, interviewing) and hiring outcomes (number of applicants, days to fill, 6-month retention rate, overall satisfaction). The study looked for associations among hiring methods while adjusting for demographic covariates (residency graduation year, primary work setting, clinical versus non-clinical position) utilizing logistic regression. A significance level of 0.05 and SAS EG v.6.1 (Cary, North Carolina) were used for all analyses.

### RESULTS

A total of 452 responses were collected for a response rate of 23%. Responding orthodontists were 73% male and 27% female. Twenty-five percent of respondents selected residency graduation before 1990, and thus had been practicing for 28 years or more. Twenty-seven percent selected residency graduation in the 1990s, and 33% selected residency graduation in the 2000s. A smaller percentage of respondents (16%) had graduated in the past 8 years. Overall, respondents exhibited a good representation across the regions of the United States. Thirty-seven percent of respondents had either 1-5 or 6-10 full-time staff, and 82% of respondents had 1-5 part-time staff. Eighty-three percent of respondents answered positively that they had hired in 2016-2017. Seventy-two percent of those hires were designated as clinical and 25% non-clinical. A complete breakdown of demographic data is shown in Table 1.

**Table 1: Respondent Demographics** 

| Gender Male 329  | <b>23%</b><br>73%<br>27% |
|--|--------------------------|
| Gender Male 329  |                          |
|  |                          |
|  |                          |
| Female 123   | 27%                      |
|  |                          |
|  |                          |
| Residency Graduation Year  |                          |
| Before 1990 112  | 25%                      |
|  | 25 <i>%</i><br>27%       |
|  | 33%                      |
|  | 16%                      |
| Indicate the geographic region for your practice:  | 20,0                     |
| Great Lakes 36   | 8%                       |
| Mid-Atlantic 26  | 6%                       |
| Midwest 80   | 18%                      |
| Northeast 53   | 12%                      |
| Pacific Coast 55   | 12%                      |
| Rocky Mountain 47  | 10%                      |
|  | 26%                      |
| Southwestern 39  | 9%                       |
| Indicate the community size for your practice:   |                          |
| Rural (less than 2,500) 4  | 1%                       |
|  | 38%                      |
|  | 42%                      |
|  | 20%                      |
| Please indicate the current number of employed full-time staff (not including orthodontists or other specialists): |                          |
|  | 37%                      |
|  | 37%                      |
|  | 17%                      |
| 16-20 16   | 4%                       |
| 21+ 22   | 5%                       |
| Please indicate the current number of employed part-time staff (not  |                          |
| including orthodontists or other specialists):   |                          |
|  | 82%                      |
|  | 13%                      |
| 11-15 8  | 3%                       |
| 16-20 2  | 1%                       |
| 21+ 3  | 1%                       |
| Which of the following most accurately describes you   | 0.007                    |
|  | 96%                      |
| I primarily work in an academic institution. 2 I primarily work in a dental service organization. 7                | 0%                       |
| i primarily work in a defital service organization.  | 2%                       |
| <br>  I primarily work in a dental multi-disciplinary private practice setting. 8                                  | 2%                       |

96% of respondents worked in a private practice setting (Table 1). Eighty-seven percent of orthodontists reported having hiring responsibility at their practice. There was a significant association between hiring responsibility and practice setting (p-value = 0.0001). For those in a private practice setting, 89% reported hiring responsibilities compared to 43% of those in a Dental Service Organization and 50% of those in multi-disciplinary practice setting. Neither of the two respondents who were in an academic setting reported playing a role in the hiring process. A complete breakdown of hiring responsibility by practice type is shown in Table 2.

**Table 2: Hiring Responsibility Based on Practice Type** 

| Practice Setting                                    | % Responsible for hiring | p-<br>value<0.0001 |
|---|--------------------------|--------------------|
| I primarily work in an orthodontic private practice |                          |                    |
| setting   | 89%                      |                    |
| I primarily work in an academic institution.        | 0%                       |                    |
| I primarily work in a dental service organization.  | 43%                      |                    |
| I primarily work in a dental multi-disciplinary     |                          |                    |
| private practice setting.                           | 50%                      |                    |

# Sourcing

Respondents with hiring responsibilities indicated their preference of sourcing method (could check more than one) to be employee referrals (46%) and online job sites (54%) (Table 3). These two were also indicated as the most common source for their most recent hire, with 35% of responding orthodontists indicating their candidate came through an online job site and 30% from employee referral. A complete sourcing breakdown is shown in Table 3.

**Table 3: Sourcing Candidates** 

|  | Sources Utilized (n,%) |     | Sour<br>Resulti<br>Eventua<br>(n, % | ng in<br>l Hire |
|--|------------------------|-----|-------------------------------------|-----------------|
| Employee Referral  | 181                    | 46% | 116                                 | 30%             |
| Patient Referral   | 32                     | 8%  | 15                                  | 4%              |
| Campus/Technical School Recruitment Recruitment Firm/Job Placement | 65                     | 16% | 28                                  | 7%              |
| Agency   | 5                      | 1%  | 0                                   | 0%              |
| Newspaper Ad (print and/or online)                                 | 72                     | 18% | 24                                  | 6%              |
| Paper Flyers   | 1                      | 0%  | 0                                   | 0%              |
| Online Job Site  | 212                    | 54% | 137                                 | 35%             |
| Other  | 91                     | 23% | 72                                  | 18%             |

Respondents were significantly more likely to utilize campus/technical school recruitment (32% vs 7%, p-value=0.0047) for clinical hires versus non-clinical hires. There were no other differences in sources utilized or source for the eventual hire. A complete source breakdown of clinical versus non-clinical hires is shown in Table 4.

**Table 4: Sourcing Candidates: Clinical versus Non-clinical Position** 

| Sources Utilized                    | Clinical | Non-Clinical | P-value |
|-------------------------------------|----------|--------------|---------|
| Employee Referral                   | 47%      | 46%          | 0.8759  |
| Patient Referral                    | 7%       | 10%          | 0.3157  |
| Campus/Technical School Recruitment | 32%      | 7%           | 0.0047  |
| Recruitment Firm/Job Placement      |          |              |         |
| Agency                              | 1%       | 2%           | 0.4597  |
| Newspaper Ad (print and/or online)  | 18%      | 18%          | 0.9899  |
| Paper Flyers                        | 0%       | 1%           | 0.0883  |
| Online Job Site                     | 54%      | 52%          | 0.7539  |
| Other                               | 21%      | 26%          | 0.41    |
| Source for Eventual Hire            |          |              | 0.1249  |
| Employee Referral                   | 30%      | 30%          |         |
| Patient Referral                    | 3%       | 4%           |         |
| Campus/Technical School Recruitment | 10%      | 1%           |         |
| Recruitment Firm/Job Placement      |          |              |         |
| Agency                              | 0%       | 0%           |         |
| Newspaper Ad (print and/or online)  | 6%       | 7%           |         |
| Paper Flyers                        | 0%       | 0%           |         |
| Online Job Site                     | 34%      | 37%          |         |
| Other                               | 17%      | 21%          |         |

## Screening

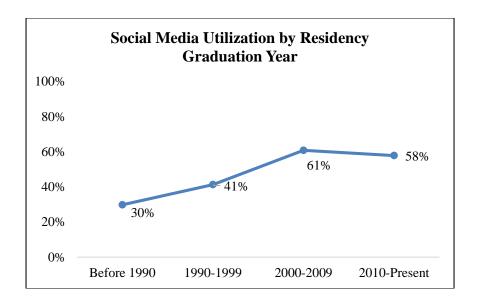
For the screening portion of the hiring process, respondents were asked who was involved and what methods were used to screen applicants. The staff involved in the screening process included practice owners (76%), office managers (47%), and 32% indicated all staff were involved in the screening process. Forty-seven percent of respondents reported using the internet and social media (Google, Facebook, etc.) to screen candidates. Among the 47% who reported internet and social media use, the most common was Facebook (93%) followed by Google (47%). Fifty-eight percent reported that utilization of online screening resulted in the removal of applicants from consideration. A complete screening breakdown is shown in Table 5.

**Table 5: Screening Candidates** 

| Screening Techniques   | n   | %   |
|--|-----|-----|
| Which of the following team members take part in your screening  |     |     |
| process  |     |     |
| Practice Owners  | 299 | 76% |
| Associate Orthodontist   | 14  | 4%  |
| Office Manager   | 185 | 47% |
| Treatment Coordinator  | 38  | 10% |
| All Staff  | 128 | 32% |
| Select Staff   | 54  | 14% |
| Other  | 7   | 2%  |
| Are search engines (i.e. Google) and/or social networking sites (i.e. Facebook) used to screen candidates? |     |     |
| Yes  | 186 | 47% |
| No   | 208 | 53% |
| Which search engines and/or social networks are predominately used when screening candidates? (n=208)      |     |     |
| Google   | 87  | 47% |
| Facebook   | 173 | 93% |
| LinkedIn   | 19  | 10% |
| Instagram  | 36  | 19% |
| Other  | 5   | 3%  |
| Has online screening information caused you to remove applicants from hiring process?                      |     |     |
| Yes  | 108 | 58% |
| No   | 78  | 42% |

There was a significant association observed between graduation year (as a measure of age) and internet and social media utilization for screening purposes (p-value<0.0001). For those orthodontists who graduated before 1990, there was 30% social media utilization for screening purposes. There was an upward trend observed for the orthodontists who graduated in the 1990s with 41% utilization, followed by 61% and 58% respectively for the graduates of the 2000s and after 2010. A social media utilization by residency graduation year is depicted in Figure 1.

Figure 1: Social Media Utilization by Residency Graduation Year



Of those who reported using the internet and social media for their most recent hire, 92% stated they will continue to use these sources in the future. Of those who reported not using the internet and social media for their most recent hire, 31% plan to use in the future, and 48% were undecided.

## Interviewing

For the interviewing process, multiple individuals assisted in evaluating job applicants. The most common team members involved in the interviewing process were practice owners (82%) and office managers (48%). The most common interview technique was a formal interview (89%) and 43% reported the use of a working interview to evaluate candidates. A complete breakdown of interviewing results is shown in Table 6.

**Table 6: Interviewing Candidates** 

| Interview Techniques                         | n   | %   |
|--|-----|-----|
| Team members who take part in your Interview |     |     |
| process                                      |     |     |
| Practice Owners                              | 325 | 82% |
| Associate Orthodontist                       | 14  | 4%  |
| Office Manager                               | 191 | 48% |
| Treatment Coordinator                        | 35  | 9%  |
| All Staff                                    | 88  | 22% |
| Select Staff                                 | 51  | 13% |
| Other  | 8   | 2%  |
| Interview Method                             |     |     |
| Formal Interview(s)                          | 351 | 89% |
| Observation(s)                               | 106 | 27% |
| Working Interview                            | 171 | 43% |
| Skills Test                                  | 31  | 8%  |
| Other  | 25  | 6%  |

Respondents were significantly more likely to utilize working interviews (48% vs 33%, p-value=0.0088) for clinical hires. A complete breakdown of interviewing methods for clinical versus non-clinical hires is shown in Table 7.

**Table 7: Interviewing Methods: Clinical versus Non-clinical Position** 

| Interview Method    | Clinical | Non-Clinical | P-value |
|---------------------|----------|--------------|---------|
| Formal Interview(s) | 89%      | 88%          | 0.6464  |
| Observation(s)      | 26%      | 27%          | 0.9811  |
| Working Interview   | 48%      | 33%          | 0.0088  |
| Skills Test         | 7%       | 9%           | 0.5702  |
| Other               | 6%       | 9%           | 0.2205  |

# **Hiring Outcomes**

Regarding the most recent hire, 65% received 1-10 applicants and 80% filled the position within the first 30 days. 94% of new hires were still employed after 6 months. Eighty-five percent of respondents were satisfied or very satisfied with the process for their most recent hire. The outcomes for the most recent hire are shown in Table 8.

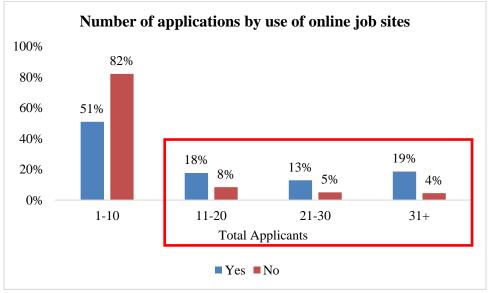
**Table 8: Outcomes of Most Recent Hire** 

| Number Applicants for Last Hire   |     |     |
|---|-----|-----|
| 1-10  | 254 | 65% |
| 11-20   | 52  | 13% |
| 21-30   | 36  | 9%  |
| 31-40   | 13  | 3%  |
| 40+   | 34  | 9%  |
| Number of days to fill last vacancy   |     |     |
| 1-15  | 143 | 37% |
| 16-30   | 168 | 43% |
| 31-45   | 50  | 13% |
| 46-60   | 11  | 3%  |
| 60+   | 19  | 5%  |
| Is/was most recent staff hire still employed:   |     |     |
| after 6 months  |     |     |
| No  | 13  | 4%  |
| Yes   | 207 | 61% |
| N/A   | 119 | 35% |
| Please indicate your level of satisfaction with the most recent staff hiring process: |     |     |
| Very Satisfied  | 160 | 41% |
| Satisfied   | 173 | 44% |
| Neither Satisfied/Dissatisfied  | 34  | 9%  |
| Dissatisfied  | 12  | 3%  |
| Very Dissatisfied   | 13  | 3%  |

The total number of applicants was significantly associated with sourcing method (employee referral, online job posting), online screening method use (Google, Facebook, LinkedIn, etc.), the source resulting in hire, and the number of days to fill the position.

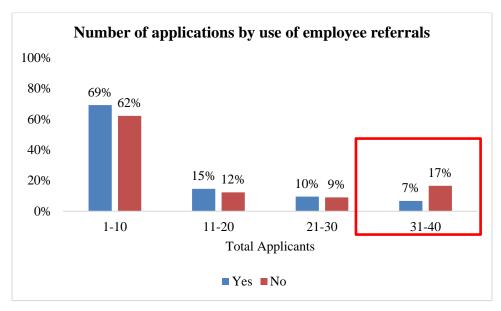
Specifically, positions posted on online job sites received more applicants (49% with more than ten applicants compared to 18% for positions not posted online; p-value<0.0001). The number of applications received from online job sites is depicted in Figure 2.



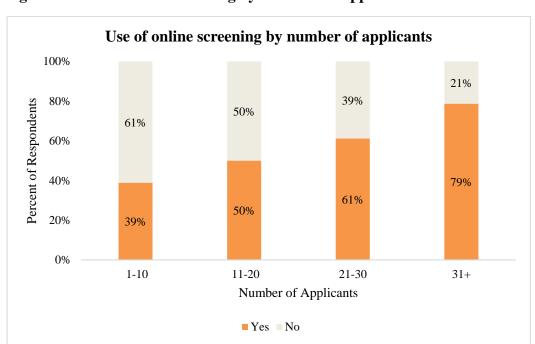


Positions recruited through employee referrals received less applicants (7% with more than 30 applicants compared to 17%, p-value<0.0309). Use of employee referrals was significantly associated with total number of applications received (p-value=0.0309), such that use of employee referrals had less applicants than those who reported not using employee referrals. The number of applications received from employee referrals is depicted in Figure 3.

Figure 3: Number of Applications by Use of Employee Referrals



The use of online screening methods was associated with an increased number of applicants. For those respondents who indicated the total number of applications received to be less than 10, only 39% utilized online screening methods. Seventy-nine percent of respondents indicated online screening use when greater than 31 applications were received (p-value<0.0001). The association between number of applications and online screening is depicted in Figure 4.



**Figure 4: Use of Online Screening by Number of Applicants** 

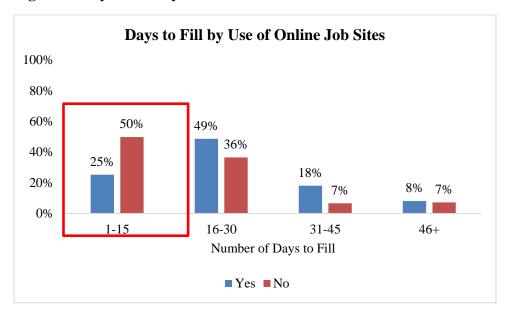
The number of days to fill the latest position was not significantly associated with the final source through which the new hire was acquired (p-value=0.0648). When comparing all sources, an increased number of applicants was associated with an increased number of days to fill the position (p-value=0.0003). For positions filled within 1-15 days, 79% had only 1-10 applicants, compared to 50-60% as the number of days to fill increased. A complete breakdown of the association between number of applicants and days to fill is depicted in Figure 5.

100% 90% 4% 10% 80% 18% 70% 13% 60% **■**31+ 50% **21-30** 40% **11-20 ■** 1-10 30% 53% 20% 10% 0% 1-15 16-30 31-45 46+ Days to Fill Position

Figure 5: Association Between Number of Applicants and Days to Fill

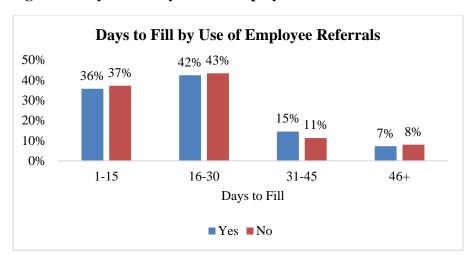
The number of days to fill the position was associated with posting the position online (p-value<0.0001). Only 25% of positions that were posted online were filled within 15 days compared to 50% of those that were not posted on online job sites. The number of days to fill the position by use of online job sites is depicted in Figure 6.

Figure 6: Days to Fill by Use of Online Job Sites



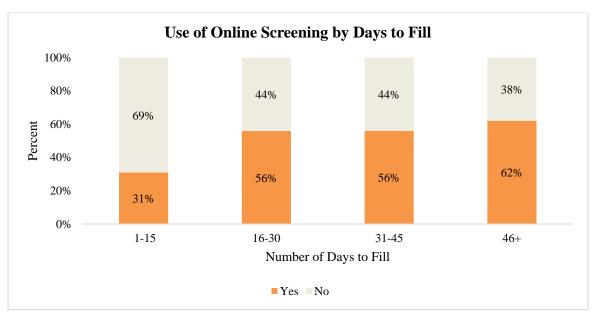
Utilizing employee referrals to fill a position was not associated with the number of days it took to fill the position (p-value=0.8177). The number of days to fill the position by use of employee referrals is depicted in Figure 7.

Figure 7: Days to Fill by Use of Employee Referrals

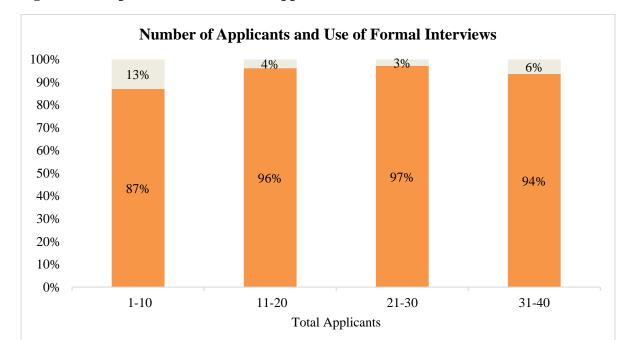


The number of days to fill the position was associated with online (Google, Facebook, Linkedin, etc) use to screen applicants (p-value<0.0001). Sixty-nine percent of jobs where candidates were not screened online were filled within 15 days compared to just 31% of those that screened candidates online. The association between days to fill and use of online screening is depicted in Figure 8.

Figure 8: Use of Online Screening by Days to Fill



Interview methods were not significantly associated with either number of days to fill or the number of applications. Formal interviews were not significantly associated with total applications (p-value=0.0584). An increased number of applicants was associated with an increase in the use of formal interviews (87% of those with 1-10 applicants used formal interviews compared to 94%-97% of those who received more applicants). The association between number of applications and use of formal interviews is depicted in Figure 9.



■ Yes ■ No

Figure 7: Comparison of Number of Applicants and Use of Formal Interviews

The top reason respondents reported hiring a candidate was based on personality (62%), with job-related skills second most important (30%), followed by years of experience (10%). A complete breakdown is described in Table 9.

**Table 9: Reasons for Selecting Most Recent Hire** 

|                      | n   | %   |
|----------------------|-----|-----|
| Personality          | 246 | 62% |
| Job-related skill(s) | 118 | 30% |
| Years of experience  | 38  | 10% |
| Availability         | 32  | 8%  |
| References           | 27  | 7%  |
| Other                | 20  | 5%  |

There was no significant difference in the main reason for hire when comparing clinical versus non-clinical positions. Results are provided in Table 10.

Table 10: Reasons for Selecting Most Recent Hire: Clinical versus Non-clinical

| Main Reason for Hire | Clinical | Non-Clinical | P-Value |
|----------------------|----------|--------------|---------|
| Personality          | 62%      | 62%          | 0.9617  |
| Job-related skill(s) | 29%      | 34%          | 0.3365  |
| Years of experience  | 10%      | 10%          | 0.8406  |
| Availability         | 9%       | 6%           | 0.4021  |
| References           | 8%       | 5%           | 0.3785  |
| Other                | 4%       | 9%           | 0.0419  |

Since many of the respondents reported on positions that were filled within the last six months, the data on final employee retention were limited to 220 respondents. Of these, 94% were still employed at 6-months. This dropped to 106 respondents at 1 year and 41 at 3 years. Due to this limited data, associations for more than 6-month retention rates and among various sourcing, screening, and interviewing techniques were not analyzed. Hiring based on personality was not associated with 6-month retention (p-value=0.8858) nor was it associated with overall satisfaction (p-value=0.1458). A full description is shown in Table 11.

**Table 11: Association Between Reason for Hire and Outcomes** 

|                        | Personality | Job-related skills | Both | Other | p-<br>value |
|------------------------|-------------|--------------------|------|-------|-------------|
| 6-month retention      | 95%         | 92%                | 94%  | 95%   | 0.8858      |
| Satisfaction           |             |                    |      |       | 0.1458      |
| Very Satisfied         | 44%         | 43%                | 42%  | 35%   |             |
| Satisfied              | 45%         | 47%                | 38%  | 38%   |             |
| Neither                |             |                    |      |       |             |
| Satisfied/Dissatisfied | 7%          | 7%                 | 8%   | 13%   |             |
| Dissatisfied           | 1%          | 2%                 | 4%   | 10%   |             |
| Very Dissatisfied      | 3%          | 2%                 | 8%   | 4%    |             |

Respondents indicated their preferred future source for hiring clinical and non-clinical staff to be employee referrals (57%) and online job site (33%). Refer to Table 12 for results.

**Table 12: Preferred Sourcing Method for Future Hiring** 

| For future hiring needs, please indicate your preferred sourcing method |     |     |  |
|---|-----|-----|--|
| Employee Referral   | 223 | 57% |  |
| Patient Referral  | 29  | 7%  |  |
| Campus/Technical School Recruitment                                     | 37  | 9%  |  |
| Recruitment Firm/Job Placement Agency                                   | 4   | 1%  |  |
| Newspaper Ad (print and/or online)                                      | 24  | 6%  |  |
| Paper Flyers  | 0   | 0%  |  |
| Online Job Site   | 129 | 33% |  |
| Other   | 28  | 7%  |  |

#### **DISCUSSION**

Orthodontists continue to work through the challenges of recruiting, screening, and hiring both clinical and non-clinical staff. According to the U.S. Department of Labor, the direct cost of a bad hire can equal 30% of the employee's potential first-year earnings. <sup>17</sup> In addition to the financial costs, the negative effect on practice culture, employee morale, and reputation can last beyond the employee's tenure. Significant resource limits can exist within an orthodontic practice when it comes to hiring. The unforeseen need for an additional employee, the limited reserves of talented candidates, and the lack of human resource professionals on staff can all contribute to a stressful hiring experience.

Effective orthodontic practices should be fully committed to the hiring process at all phases. The ability to attract and retain talented employees is a reliable predictor of business success. <sup>17</sup> This study attempted to identify the changing trend of hiring methods within private orthodontic practices. Four specific hiring outcomes were tested based on the methods currently utilized by orthodontists for sourcing, screening, and interviewing. The findings may reflect a more precise overview of the changing trend for hiring in private orthodontic practices.

#### **Demographics**

The twenty-three percent orthodontist response rate was adequate for gaining a better understanding of current hiring methodology utilized in orthodontic practices. The male to female ratio of responding orthodontists was a representative ratio for the active male and female members of the American Association of Orthodontists. There was a fairly even percentage of responses from each of the four graduation year groupings. The 2010-Present grouping was

lower, but that can be attributed to there being less years within that grouping. Also those individuals were more recent graduates and could have had less ownership experience and thus less hiring responsibilities at the time of the survey. The survey was able to target a small business-minded representative sample as evidenced by the ninety-six percent of responding orthodontists who primarily worked in a private practice setting. Orthodontists who work in an academic institution or for a Dental Supprt Organization (such as Western Dental, Kool Smiles, Pacific Dental Services) do not face the same constraints as small businesses related to hiring clinical or non-clinical staff. Academic institutions often have a human resources department dedicated to the hiring of personnel at either the school of dentistry or university level. Those orthodontists who responded that they primarily work in an academic institution indicated they had no hiring responsibility. Dental Support Organizations (DSOs) market themselves to dentists and dental specialists as organizations that manage the business operations, including human resources. By removing orthodontists from the business operations or human resource functions, DSOs claim that they allow orthodontists to focus on the treatment care of patients. <sup>18</sup> Of those who responded as primarily working in a DSO, only 43% had hiring responsibility.

#### Sourcing

Sourcing is the use of one or more strategies to relate talent to organizational vacancies.<sup>1</sup>
Recruiting and attracting the right person to your office should be a well-thought out process.<sup>9</sup>
Orthodontists should strive to not only be an attractive practice to potential patients but also to potential employees. Classified ads, job boards, online resume databases, online employment job sites, and social media all provide avenues to advertise open positions and recruit candidates.

Recruitment is a vital function of talent management and encompasses the process of discovering

the personnel to meet the requirements of the staffing agenda and attracting an adequate number of candidates. <sup>1,8</sup>

Similar to the Heneman small business study, recruitment source usage was associated with four outcome measurements: applicants received, days-to-fill, 6-month retention rate, and satisfaction. Three recruitment sources with impacts on the respective outcomes were employee referrals, online job sites, and use of social and professional networks.

The internet facilitates the hiring process for both the orthodontist and individual seeking employment. <sup>19</sup>When it comes to sourcing talent, orthodontists are eager to take advantage of the internet and online channels. In this study, online job sites (54%) such as Monster, CareerBuilder, were indeed selected more than any other sourcing channel. Online channels provide an easy and accessible means to post open employment positions, receive and review resumes, and even have applicants pre-screened (depends on the online job site functionality). Thirty-five percent of responding orthodontists indicated that an online job site was the source for their most recent hire.

Employee referral was a useful sourcing channel for many orthodontists as 46% of respondents selected its use. Current employees were able to recognize the work values that are critical to their specific orthodontic practice. These same employees were able to clearly articulate such values to their potential referral ahead of time to ensure he or she would be a proper fit to their orthodontic practice. Mayerson recommended the first place to check is with current staff members.<sup>10</sup>

Offline channels were viewed as a relatively unsuccessful hiring method. In the current study, campus/technical schools, recruitment agencies, job fairs, newspaper advertisements, paper flyers were used by a relatively low number of orthodontists and delivered an even lower

successful hire rate. It can clearly be seen that the sourcing trend has significantly shifted from offline to online.

#### Screening

Forty-seven percent of respondents reported using the internet and social media (Google, Facebook, etc.) to screen candidates. Among the 47% who reported internet and social media use, the most common medium was Facebook (93%) followed by Google (47%). Fifty-eight percent reported that utilization of online screening resulted in the removal of applicants from consideration. Literature to date is controversial, but the use of the internet and online searches may in fact encroach upon a person's privacy. According to the U.S. Equal Employment Opportunity Commission regarding coverage of business and private employers, "The U.S. Equal Employment Opportunity Commission enforces Federal laws prohibiting employment discrimination. These laws protect employees and job applicants against employment discrimination when it involves: Unfair treatment because of race, color, religion, sex (including pregnancy, gender identity, and sexual orientation), national origin, age (40 or older), disability or genetic information." An employer must have a certain number of employees to be covered by the laws that are enforced; "...the business is covered by the laws we enforce if it has 15 or more employees who worked for the employer for at least twenty calendar weeks (in this year or last)." 20

Orthodontic practices should be cautious when viewing information shared by prospective employees on social networking sites. <sup>21</sup> Stoughton et al found that social networking website screening caused applicants to feel their privacy had been invaded, which ultimately resulted in lower organizational attractiveness or potential equal employment opportunity concerns. <sup>12,16</sup> If recruiters or hiring managers view a candidate's online social media profile, US

courts will assume that they are aware of their "protected characteristics:" race, gender, religion, age, sex, veteran's status, and level of disability. By becoming aware of these characteristics, human resource or hiring managers are opening themselves up to questions of discrimination. The value of the information that is obtained must be balanced with ethical standards. As mentioned in Sinha's article (2013), hiring organizations should be cautious when relying on social networking sites until the reliability and validity is examined.

### **Interviewing**

Eighty-two percent of respondents indicated participation in the interview process.

Testing each new applicant has been a recommended practice for maintaining an objective hiring process. <sup>10</sup> Very few (8%) of responding orthodontists actually utilized testing during the interview process. The preferred interview method was a formal interview (89%) followed by a working interview (43%). Due to the differences in job requirements for clinical versus non-clinical staff, it is not surprising that a significant association for use of working interviews with clinical staff was observed. Non-clinical staff perform a variety of business office functional roles while the clinical staff positions include direct patient care. Due to the responsibilities for clinical staff, a license and/or certification to perform certain job functions may be required and varies from state to state based on the requirements of the state dental board. The working interview can be utilized to ensure potential staff members meet or exceed the job (and/or licensure/certification) requirements when performing direct patient care under the supervision of the orthodontist.

#### **Outcomes**

Orthodontists were asked four outcome questions regarding their most recent hire. These four hiring outcomes served as dependent variables: (1) number of applicants received; (2) number of days to fill position; (3) six-month retention rate of new hires; (4) level of satisfaction. Additional time periods were included for the retention rate outcomes; however, due to the number of most recent hires being within the previous 12 months, a large number of respondents selected "Not Applicable" for the extended time periods.

Online channels ranked highest in terms of both overall usage and successful hire rates, with employee referrals a strong second. Employee referrals reduced the number of applications received, but did not result in a significantly reduced number of days to fill the staff vacancy. Even though the time to fill the position was found to be similar between employee referrals and online job sites, an individual with hiring responsibility may in fact spend more quality time with the employee referral applicant, resulting in a more satisfactory outcome for both the employer and employee.

Orthodontists tended to hire for personality instead of skill alone. Sixty-two percent of orthodontists selected personality as their top criterion for their most recent hire. As quoted Parker's article, "equally important is the individual's ability to relate to patients and parents to be able to address their individual needs and concerns while maintaining efficiency and productivity in the office." <sup>17</sup> Similar to the hospitality industry, every employee of an orthodontic practice should have a mindset for customer service. <sup>22</sup>

#### **Future Considerations**

Sixty percent of respondents indicated that they intended to utilize the internet or social media in their future hiring needs. There are ways for orthodontists to further integrate their traditional hiring methods with innovative means. Future utilization of the internet or social media for brand development and practice reputation is crucial to attracting the best employees.<sup>8</sup> The importance of an orthodontist's reputation is well known to be an important factor when patients and parents choose their orthodontic treatment provider, but it is equally important to a potential employee.<sup>23</sup> The concept of Social Recruiting can take advantage of an orthodontist's social media platforms to support his or her traditional hiring strategies. Orthodontists should already have an internet presence to attract potential patients. Nelson et al found the most commonly used marketing strategies by orthodontists to be social media and a practice website.<sup>23</sup> Utilizing those same mediums to showcase their private practice office and team to future employees is an effective method to build a positive reputation. Innovation and psychological value, along with the use of social media positively relate to corporate culture, which in turn is positively linked to the intention of applying for a job. 8 Orthodontic and dental marketing consultants recommend developing a brand for the current and future patients to recognize. The orthodontic practice brand is not only used for marketing itself to patients, but also to attract potential employees. 8 The psychological concepts of reputation, attractiveness, image and brand equity have been used to describe what job seekers emphasize when they consider applying for a job.<sup>24</sup> Orthodontists take an earnest approach to communicate their practice's brand to prospective patients and also it should be communicated to potential employees.

Twenty-three percent of respondents selected their hiring source as 'Other.' Eighteen percent of respondents indicated 'Other' for their eventual hire. An analysis was performed of

the written comments for those who selected 'Other' due to the large percentage of respondent selection. Examples for 'Other' include referrals from colleagues, Facebook posts, Instagram posts, referrals from patients, or referrals from past interns. Based on the findings and examples provided, the author categorized those to be representative of a social and professional network. The social component of those examples included Facebook and Instagram posts, while the professional (more business natured) were referrals from colleagues, patients, and past interns. As Nelson et al alluded to, social media was originally for personal use; however, businesses across industries adopted them for marketing, communication, and hiring purposes.<sup>23</sup> The internet and social media have revolutionized the way humans communicate and share information. The utilization of an individual's network (professional or social) may lead to a more effective hiring process. Fifty-seven percent of respondents selected Employee Referral as their preferred method for future hiring needs. Orthodontists desire to shift the focus of hiring from anonymous candidates via online job sites, and prefer to tap into their social and professional networks via referrals and social media, resulting in potentially a more timely and cost-effective hiring process.

Orthodontists should carefully scrutinize their hiring methodology when attempting to fill an open position. The data suggest if the primary concern in hiring is to generate a large number of applicants, the orthodontist should focus on the use of online job sites. Alternatively, if the orthodontist would like to have a smaller number of applicants, then utilizing their employees and social and professional networks would be a better choice. Orthodontists need to review and treat their hiring strategies (specifically their sourcing methods) as strategic choices. Employer branding has emerged as a strategic tool when utilized for hiring purposes. Organizations with a strong employer brand may have the advantage of reduced cost for employee acquisition,

improved employee relations, and increased retention. <sup>7</sup> As important as it is for organizations to look for the right candidates, it is equally important for the applicants to be attracted to those same organizations. <sup>7,25</sup> Organizations that see employees as their first customer, satisfy their external customers because employees will take better care of them. <sup>26</sup> In a direct correlation to an orthodontic practice, the more an orthodontist sees his or her staff as their first employee, the better care the patients may receive. The study's methodology and results may provide new opportunities for improving orthodontic practices.

#### **CONCLUSION**

This study investigated current hiring methodologies utilized in orthodontic private practices.

The following points can be concluded:

- Orthodontists will continue to utilize the Internet and Social Media in their future hiring needs
- Use of online job sites resulted in more applications and more days to fill a staff vacancy
- Orthodontists prefer to hire from employee referrals and based on personality
- Even though online job sites accounted for the majority of the most recent hires,
   orthodontists indicated that their future preference is to utilize employee referrals
   for their staff hiring needs
- By using accessible sourcing channels such as social media, online job sites, and employee referrals, orthodontists may be able to effectively hire staff with minimum cost
- The use of social and professional relationships, rather than online job sites, may
   lead to a more efficient hiring process and satisfactory outcome

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## **APPENDICES**

**Appendix 1: Survey to Orthodontists** 



### **Comparison of Hiring Strategies of Orthodontic Private Practitioners**

You are invited to participate in a research study investigating the hiring strategies of orthodontic private practitioners. Your participation in this study is voluntary. All responses are anonymous and no personal identifiers will be collected. You may stop taking the questionnaire at any point and withdraw from the study. The survey should take approximately 5 - 10 minutes to complete. If you elect to participate, please read and follow the instructions below. Thank you for your participation.

#### **Instructions:**

For the purpose of this study we ask that you **answer questions for Sections B-E based on your most recent staff hire** (either clinical or non-clinical staff personnel).

The survey is divided into the following six sections:

- A) Demographics of responding orthodontist
- B) Hiring Sourcing Candidates: How are people recruited to apply for a staff vacancy?
- C) Hiring Screening Applicants: What methods are used to screen applicants?
- D) Hiring Interviewing Applicants: What methods are used to interview applicants?
- E) Hiring Outcomes
- F) Future hiring considerations

Once you have completed the survey, please place the survey packet in the return envelope provided. You may tear off and keep this cover sheet for your records before mailing the survey packet back (this is to ensure you have a copy of the study team's contact information, if you wish).

If you have any further questions, you may contact the research team at:

VCU Office of Research Subjects Protection 800 East Leigh Street, Suite 3000 BioTech One Building Box 980568 Richmond, VA 23298

Department of Orthodontics VCU School of Dentistry 520 N. 12<sup>th</sup> St. Richmond, VA 23298 bshroff@vcu.edu (804) 828-9326

Bhavna Shroff, D.D.S., M.D.Sc.

Steven C. Petritz, D.D.S. Department of Orthodontics VCU School of Dentistry 520 N. 12<sup>th</sup> St. Richmond, VA 23298 petritzs@vcu.edu (804) 828-0843

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# A) Demographics

| 1. | 1. Please indicate your gender:   |   |  |  |  |
|----|---|---|--|--|--|
|    | Male Female   |   |  |  |  |
| 2. | 2. Please indicate your orthodontic residency graduation year:  |   |  |  |  |
|    | Before 1990 1990-1999 2000-2009   | 2010-present  |  |  |  |
| 3. | 3. Please indicate the geographic region for your practice(s) (Based on region Association of Orthodontists):   | onal constituents of the American                     |  |  |  |
|    | Great Lakes Mid-Atlantic Midwest Pacific Coast Rocky Mountain Southern  | Northeast Southwestern                                |  |  |  |
| 4. | 4. Please indicate the community population of your practice:   |   |  |  |  |
|    |   | City (2,500-50,000) (more than 500,000)               |  |  |  |
| 5. | 5. Please indicate the current number of employed <u>staff</u> (not including ort   | hodontists or other specialists):                     |  |  |  |
|    | Full-time: $\square$ 1-5 $\square$ 6-10 $\square$ 11-15 $\square$ Part-time: $\square$ 1-5 $\square$ 6-10 $\square$ 11-15 $\square$   | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |  |  |  |
| 6. | 6. Please indicate which of the following most accurately describes you:  |   |  |  |  |
|    | ☐ I primarily work in an orthodontic private practice setting. ☐ I primarily work in an academic institution. ☐ I primarily work in a dental service organization. ☐ I primarily work in a dental multi-disciplinary private practice setting. Please describe below. |   |  |  |  |
|    |   |   |  |  |  |



| 7.         | Please indicate if you had hiring responsibilities for the <b>most recent staff hire</b> :  |  |  |  |
|------------|---|--|--|--|
|            | Yes No. Please answer (a.) below and stop completing the survey. You may return the survey in the provided pre-paid envelope.   |  |  |  |
|            | a. If <b>no</b> , who primarily performs the staff hiring?  |  |  |  |
|            | Practice Owner(s) Office Manager Other. Please describe position(s)  Associate Orthodontist(s) Treatment Coordinator  |  |  |  |
| 8.         | Please indicate the year for the <b>most recent staff hire</b> :  |  |  |  |
|            | Please respond in format XXXX.  |  |  |  |
| 9.         | Please indicate which of the following best describes the <b>most recent staff hire</b> :   |  |  |  |
|            | Clinical Non-clinical Other. Please describe  |  |  |  |
| <b>B</b> ) | Hiring – Sourcing Candidates  |  |  |  |
| 10         | . Please indicate the sourcing methods utilized during the <b>most recent staff hire</b> . ( <b>Mark all that apply</b> ):  |  |  |  |
|            | Employee referral  Campus / Technical school  Newspaper classified ad (print / online)  Online job site portal (CareerBuilder, Craigslist, LinkedIn, etc.)  Other. Please describe sourcing method. |  |  |  |
| 11         | . Please indicate the sourcing method that resulted in the <b>most recent staff hire</b> . ( <b>Mark only one</b> ):  |  |  |  |
|            | Employee referral  Campus / Technical school  Newspaper classified ad (print / online)  Online job site portal (CareerBuilder, Craigslist, LinkedIn, etc.)  Other. Please describe sourcing method. |  |  |  |



# C) Hiring – Screening Applicants (Activities PRIOR TO Interviewing)

| hire. (Mark all that apply):  | ı |
|---|---|
| Practice Owner(s)  Office Manager  All staff  Select staff. Please describe.  Other. Please describe.   |   |
| 13. Please indicate if search engines (i.e. Google) and/or social networking sites (i.e. Facebook, Instagram, etc.) were utilized for gathering background information during the <b>most recent staff hire</b> . |   |
| a. If yes, which search engine(s) and/or social networking sites were used throughout the screening process? (Mark all that apply)  Google LinkedIn Other. Please comment.  |   |
| b. If <b>yes</b> , please indicate if the gathered search engine and/or social networking site information caused you to remove applicants from the hiring process:   | 1 |
| Yes No  |   |



# D) Hiring - Interviewing Applicants

| 14. Please indicate which team member(s) took part in the <u>interviewing</u> process for the <b>most recent</b> staff hire. (Mark all that apply):  |
|--|
| Practice Owner(s)  Office Manager  All staff  Select staff. Please describe  Other. Please describe.  15. Please indicate which of the following interview methods were utilized during the hiring process |
| for the <b>most recent staff hire</b> . ( <b>Mark all that apply</b> ):  |
| Formal interview(s)  Working interview. Please describe.  Skills test. Please describe.  Other. Please describe.  The following are to be answered for the most recent staff hire – same as above)         |
| 16. Please indicate how many applications were received for the <b>staff vacancy</b> :   |
|  |
| 17. Please indicate how many days from when you started searching until you filled the <b>staff vacancy</b> :  |
| $\square$ 1-15 days $\square$ 16-30 days $\square$ 31-45 days $\square$ 46-60 days $\square$ 60 or more days   |
| 18. Is/Was the <b>most recent staff hire</b> employed:   |
| After 6 months?  Yes  No  Not applicable  Not applicable  Not applicable  Not applicable  Not applicable  Not applicable   |

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| 19. Please indicate the <b>main factor</b> for your <b>most recent staff hire</b> . ( <b>Mark only one</b> ):  |  |  |  |  |
|--|--|--|--|--|
| Personality  Job-related skill(s)  Years of experience  Availability (start date availability, scheduling availability, etc.)  References  Other. Please describe.                           |  |  |  |  |
| 20. Please indicate your level of satisfaction with the most recent staff hiring process:  |  |  |  |  |
| Very Dissatisfied Dissatisfied Neither Satisfied Satisfied Very Satisfied nor Dissatisfied   |  |  |  |  |
| F) Future Hiring Considerations  |  |  |  |  |
| 21. For future hiring needs, please indicate your preferred sourcing method. ( <b>Mark only one</b> ):   |  |  |  |  |
| Employee referral  Campus / Technical school  Newspaper classified ad (print / online)  Online job site portal (CareerBuilder, Craigslist, LinkedIn, etc.)  Other. Please describe.          |  |  |  |  |
|  |  |  |  |  |
| 22. For future hiring needs, please indicate if search engines (i.e. Google) and/or social networking sites (i.e. Facebook, Instagram, etc.) will be utilized throughout the hiring process: |  |  |  |  |
| Yes No Undecided   |  |  |  |  |
| ******   |  |  |  |  |
| Thank you for your time and effort in the completion of the above survey. Please feel free to write  |  |  |  |  |

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comments on the following page.



| Comments: |  |
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#### **VITA**

Steven Petritz was born on August 16, 1981 to Dr. David and Cornelia Petritz. Steven was raised in West Lafayette, Indiana along with his older sister, Katie. He graduated from West Lafayette High School in 2000, and went on to receive his Bachelors of Science Degree in Management from Purdue University in December 2004. After completing the requirements for his undergraduate degree, Steven worked as a management consultant for Accenture based out of the Chicago, Illinois office. Steven retired from his Accenture position after five years and started his journey to become an orthodontist. Steven attended the University of California Los Angeles School of Dentistry and received his Doctor of Dental Surgery in 2016. Steven was accepted to Virginia Commonwealth University for completion of his orthodontics residency and received a Certificate of Orthodontics and Master of Science in Dentistry in 2018. Steven plans to work in Raleigh, North Carolina while his wife pursues a tenure track position at the North Carolina State University College of Veterinary Medicine as an assistant professor.