

## Compensation and Position Characteristics of Dental Hygiene Program Directors

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### Abstract

**Purpose:** The purpose of this study was to collect information about dental hygiene program directors (PD) in order to create a comprehensive position profile for the profession and add to the current literature regarding employment trends and compensation in dental hygiene education. Information gained through this study addresses a gap in the literature and could be utilized by current and future educators considering a dental hygiene program director role or for recruitment purposes.

**Methods:** An electronic survey, consisting of 38 items addressing areas including job characteristics, requirements, compensation, and anticipated retirement, was sent to PDs of all the Commission on Dental Accreditation (CODA) accredited dental hygiene programs in the United States (n=314). Descriptive and inferential statistics were used to analyze the data. ANOVA analyses were used to determine whether significant differences existed regarding salary and compensation, contact hours, total working hours, contract characteristics, and job expectations.

**Results:** Directors from 122 programs responded yielding a response rate of 39%. Seventy-one percent of respondents were aged 50-59 years and 46% reported having held the program director position for 3 years or less. Thirty-five percent of participants plan to retire from their program director position in the next five years. In regards to compensation, 47% of respondents indicated making between \$60,000 and \$79,999 and 3% reported earning less than \$40,000 while 4% indicated salaries over \$100,000. Total number of teaching years and highest degree held demonstrated a positive impact on adjusted monthly salary. PDs employed in university settings were significantly more likely to have ongoing requirements for scholarly activity; those employed in settings associated with a dental school had a longer average contract length than directors in other institutions. Potential dental hygiene PDs should expect an average workweek of 40-50 hours, with the majority of the time spent on administrative duties. Additional responsibilities include teaching, scholarly activity, and committee work.

**Conclusion:** A position profile detailing the range of employment expectations for dental hygiene PDs has been created and can serve as a guide to inform and recruit potential program directors.

**Keywords:** dental hygiene education, dental hygiene faculty administrators, faculty development, dental faculty supply, credentialing

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### Introduction

Dental hygiene education has been evolving and growing over the last fifty years. This continuous growth has also created a surge in the number of dental hygiene faculty who have either retired or are reaching retirement age,<sup>1</sup> thus creating an increased need for dental hygiene educators.<sup>2</sup> Faculty shortages has been well-documented in both dental as dental hygiene schools, primarily due to faculty departures as opposed to newly created positions.<sup>3-6</sup> Carr and colleagues estimated that almost half of dental hygiene educators will be retiring by the year 2020, in their study on dental hygiene faculty shortages.<sup>7</sup> Increasing age among faculty has also been recognized as an

issue. Collins et al. reported in 2007 that the average dental hygiene faculty member age was 50.2 years.<sup>8</sup> In the 2016 American Dental Education Association (ADEA) survey of allied dental PDs, nearly a third of current faculty members were found to be between the ages of 50-59 (29%), with the second largest group between 40-49 years of age (24%).<sup>9</sup> As the retirement rates and average age of educators has not significantly changed between the 2007 and 2016 surveys, these numbers suggest that faculty shortages due to retirement remain persistent. Additional reasons cited in studies examining dental hygiene faculty vacancies include a lack of qualified applicants, or a lack of applicants in general, retirement, and insufficient

compensation. Salary has also been identified as a barrier for those entering the field of dental hygiene education due to the typically higher wages available in clinical practice.<sup>7,9,10</sup>

Given the large number of dental hygiene educators nearing or at retirement age, many in the PD position, it is critical for the profession to recruit future educators and leaders while still retaining current faculty. One strategy has been to introduce dental hygiene students to education as an identified career path within the program curriculum.<sup>7,11,12</sup> However, recent graduates often cite student debt, concerns over a lower salary, lack of interest and the inability to envision a long-term career plan as reasons not to seek a career in dental hygiene education.<sup>7</sup> Further challenges include the current focus on faculty development issues rather than faculty retention and recruitment.<sup>13,3,6</sup>

Academic credential requirements can also be a barrier to potential dental hygiene educators. It is considered desirable, and may be required, for full-time faculty members to hold a degree one level higher than what is granted by their institution. Commission on Dental Accreditation (CODA) standards also require all program directors to either hold or be in pursuit of a master's degree or higher.<sup>14</sup> Research indicates that possessing a master's degree, or higher, better prepares educators for holding leadership positions such as dental hygiene PD.<sup>15,16</sup> There has been a growth in the number of master's degree programs, currently 21 related to dental hygiene, to give aspiring educators increased opportunities to gain the necessary credentials for an academic position.<sup>17</sup>

The American Dental Hygienists' Association (ADHA) has had policy advocating the baccalaureate degree as the entry level degree for dental hygiene since 2005.<sup>18</sup> The process of transitioning to a bachelor's degree is difficult since the majority of dental hygiene programs are delivered in community college settings, which traditionally award associate's degrees exclusively. Recently, a number of community colleges, two located in the Pacific Northwest, have been successful in transitioning their program coursework and degree awarded from an associate's to a bachelor's.<sup>19,20</sup> Increases in this trend, can potentially enable more individuals to pursue advanced education, particularly since one-third of the current dental hygiene educators hold a bachelor's degree as their highest degree.<sup>9</sup>

The American Dental Education Association (ADEA) Allied Dental Program Directors survey is conducted on a regular basis to monitor employment trends within all allied dental education; including dental hygiene, dental laboratory technician, and dental assisting faculties. Among other variables, the ADEA survey assesses percentages of time spent on different job duties, vacant positions, salary information, and demographic characteristics. Results from the 2016

survey state that during the 2015-16 academic year there were 43 retirements of dental hygiene faculty and project that by the year 2020 there will be an estimated 415 additional retirements.<sup>9</sup> The ADEA survey also reported salary averages of \$70,000-79,999 for administrators, and a contract length of 12 months for most administrative positions. While the ADEA survey addresses many of the facets of the program director position, these topics were examined broadly, utilizing descriptive statistics.

Educators interested in advancing to a PD position would likely need to consider a large shift in their professional responsibilities and workload. Little information has been found in the current literature related to the position expectations and compensation for PDs. The purpose of this study was to collect information about PDs in order to create a comprehensive position profile for the profession and add to the current literature regarding employment trends and compensation in dental hygiene education. Information gained through this study addresses a gap in the literature and could be utilized by current and future educators considering a dental hygiene PD role or for recruitment purposes.

## Methods

A cross-sectional survey of PDs was conducted during the month of October, 2015. The author-developed survey instrument, created to address issues not included in the most recent ADEA allied dental program director survey, was considered exempt by the Pacific University Institutional Review Board (IRB). The validity and reliability of the survey instrument was pilot tested by five program directors and revisions were made based upon feedback. The final instrument consisted of 38 items addressing the following areas: position characteristics; required duties and expectations of PDs; director compensation; anticipated retirement dates of PDs as well as faculty members; and general demographics, including age and geographic region. The survey was developed using Qualtrics software (Qualtrics, Provo, UT) and administered via email. Authors manually collected names and email addresses of PDs from the American Dental Hygienists' Association website. An email invitation to participate was sent to all PDs of CODA accredited dental hygiene programs in the United States. A total of 328 invitation emails were sent, of which 14 were undeliverable, yielding 314 successfully delivered email invitations.

Data were analyzed using SPSS (version 23, IBM), using descriptive and inferential statistics. ANOVA analyses were used to determine whether significant differences existed regarding salary and compensation, contact hours, total working hours, contract characteristics, and job expectations. Explanatory variables for these analyses included: highest degree held, institution type, and geographical region of the country. Linear regression

analyses were used to determine if salary was influenced by number of years in the program director position and total number of years in education. Due to the variations in contract length (9-12 months), total yearly salary as well as an adjusted monthly salary (AMS), in which the yearly salary was divided by the number of months in the contract, was analyzed. Statistical significance was set at 0.05.

## Results

Responses were received from 122 (n=122) PDs yielding a response rate of 39%. Comprehensive demographic information is summarized in Table I. Seventy-six percent of respondents indicated employment in a community college or technical school. The highest degree held by the majority of PDs (70%, n=78) was a master's degree. Forty-six percent of respondents have been in their current position for 3 years or less. It is also noteworthy that 60% of responding PDs have been in their positions for five years or less. In regards to number of years of experience in education, responses varied widely however 59% reported having more than 15 years of experience. Most respondents (71%) were between the ages of 50 and 69, and 94% identify as being white or Caucasian. Thirty-five percent of those surveyed (n=39) indicated that they plan to retire sometime in the next five years.

Respondents reported averaging 45.5 hours of work per week (Table II), with peaks identified at 40 and 50 hours. (Figure 1) The majority of the PD's time was spent on administrative duties with a mean of 21.5 hours per week (Table II), with peaks occurring at 20 and 30 hours. (Figure 2) Total student contact hours, or time spent with students varied greatly with the mean amount of time between 11.4 hours per week. (Table II) Peaks in the student contact hour data were identified at 8, 9, 10, and 15 hours. (Figure 3) In regards to the number of hours spent with students in a clinical setting, 6.2 hours were reported on the average with peaks occurring at 1, 5, and 9 hours. (Figure 4) Respondents reported spending an average of 4.4 hours per week teaching in the classroom, with a peak shown at 4 hours. (Figure 5) When asked about additional institutional expectations for PDs, 90% of respondents indicated committee work requirements, while only one third (32% n=37) were expected to participate in scholarly activity. A majority of program directors indicated that they were required to

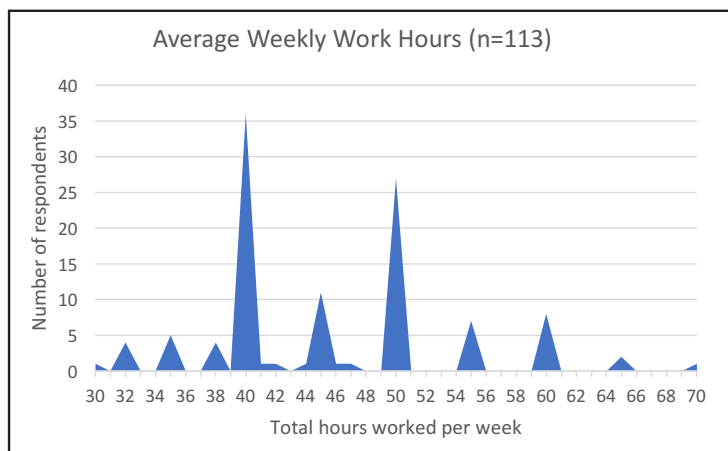
**Table I.** Respondent Demographics

<b>Years in current Position (n=110)</b>	<b>n (%)</b>
1 year or less	18 (16%)
2 years	17 (16%)
3 years	16 (14%)
4 years	9 (8%)
5 years	6 (6%)
6-10 years	22 (20%)
11-15 years	12 (11%)
16-20 years	3 (3%)
>20 years	7 (6%)
<b>How many total years have you worked as an educator? (n= 111)</b>	<b>n (%)</b>
≤5 years	7 (6%)
6-10 years	18 (16%)
11-15 years	21 (19%)
16-20 years	26 (23%)
21-30 years	25 (23%)
31-40 years	13 (12%)
>40 years	1 (1%)
<b>Participant Race (n=110)</b>	<b>n (%)</b>
White	103 (94%)
African American	2 (2%)
Asian	1 (1%)
American Indian/Alaska Native	1 (1%)
Native Hawaiian/Pacific Islander	1 (1%)
Other	2 (2%)
<b>Participant Ethnicity (n=106)</b>	<b>n (%)</b>
Hispanic or Latino	8 (8%)
Non-Hispanic	98 (92%)
<b>Participant Age (n=109)</b>	<b>n (%)</b>
≤29 (born 1986 or later)	1 (1%)
30-39 (born1976-1985)	8 (7%)
40-49 (born1966-1975)	21 (19%)
50-59 (born 1956-1965)	56 (51%)
60-69 (born 1946-1955)	22 (20%)
≥70 (born 1945 and before)	1 (1%)
<b>Institutional Setting (n= 122)</b>	<b>n (%)</b>
Community College/Technical College	93 (76%)
University Affiliated w/Dental School	10 (8%)
University Not Affiliated w/Dental School	19 (16%)

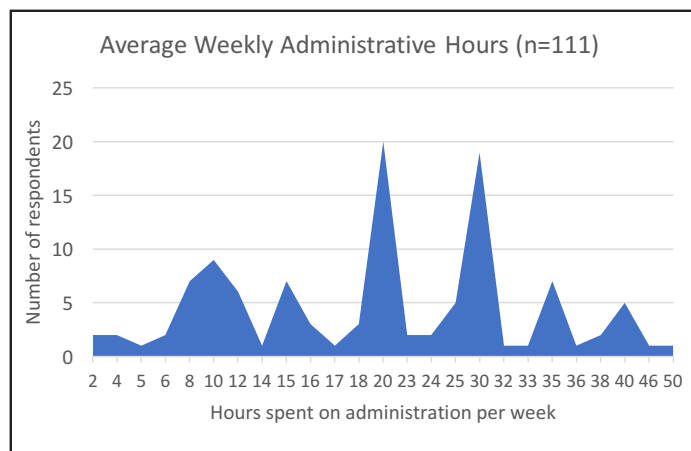
have a master's degree (91%).

Respondents reported spending an average of 3.9 hours per week on scholarly activity. (Table II) Scholarly activity peaked at 3 hours, however there was a range from as little

**Figure 1.** Average weekly work hours



**Figure 2.** Average weekly administrative hours



**Table II.** Work distribution and job expectations of program directors

Number of hours allotted to activities	Mean (SD)
Administration (n=111)	22.5 (10.7)
Total contact hours (n=110)	11.4 (6)
Classroom Teaching (n=111)	4.4 (3.1)
Clinical Teaching (n=110)	6.2 (4.6)
Scholarly Activity (n=36)	3.9 (2.8)
Committee work (n=99)	3.3 (2.4)
Total work hours per week (n=113)	45.5 (8)
Requirements/Expectations of Program Director Position:	n (%)
Committee work (n=114)	102 (90%)
Scholarly activity (n=115)	37 (32%)
What counts as scholarly activity at your institution? (n=37)	n (%)
CE course presentations or other professional presentations	34 (92%)
Original research publications in peer reviewed journals	26 (70%)
Research poster presentations	26 (70%)
Textbook/textbook chapter writing	24 (65%)
Published literature reviews in peer reviewed journals	22 (59%)
Other published work	13 (35%)
Mentoring graduate students	4 (11%)
Grant writing	3 (8%)
Additional Requirements	n (%)
Required to present at professional meetings (n=114)	27 (24%)
Minimum educational requirement (n=115)	n (%)
Bachelor's degree	6 (5%)
Master's degree	105 (91%)
Doctoral degree	4 (4%)

as 1 hour to as much as 11 hours. PDs employed in university settings were required to complete scholarly activity significantly more often than those in community college settings ( $p < 0.0001$ ) as shown in Table III. Of the respondents ( $n = 37$ ) who indicated that scholarly activity was required at their institution, the types of scholarly activity included the following: continuing education (CE) course presentations or other professional presentations (92%); original research publications in peer-reviewed journals (70%); research poster presentations (70%); textbook chapter writing (65%); published literature reviews in peer reviewed journals (59%); other published work (35%); mentoring graduate students (11%); and grant writing (8%) shown in Table II. There were no statistically significant findings when evaluating the relationship between institution type and differences between student contact hours, clinical hours, administration, and total working hours.

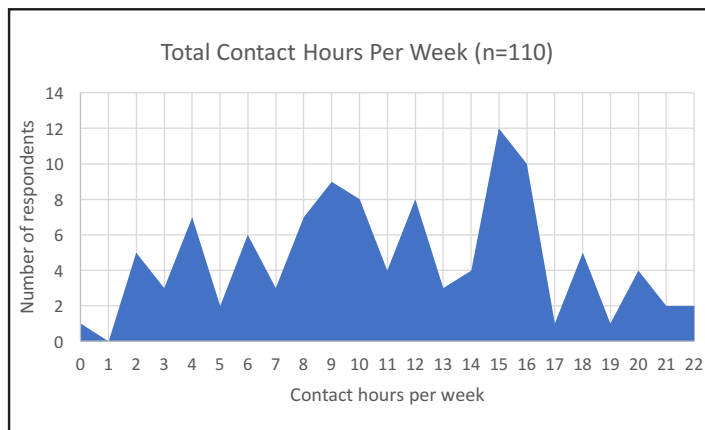
In regards to compensation, 47% of respondents indicated earning between \$60,000 and \$79,999, while 3% earned less than \$40,000 and 4% indicated salaries over \$100,000. (Table IV and Figure 6) The majority of the PDs surveyed indicated having a 12-month contract (55%), while others had contracts ranging from 9 to 11 months. (Table IV) PDs employed in a dental school setting had a longer average contract length when compared to directors in a community college environment ( $p = 0.031$ ) as shown in Table V. Some respondents also reported receiving additional pay for administrative duties, CE courses, additional service to the

**Table III.** Scholarly activity requirements by institution type. (n=115)

Institution Type	Scholarly Activity Required n(%)	Scholarly Activity Not Required n(%)
Technical School	1 (5%)	19 (95%)
Community College	14 (21%)	53 (9%)
University within a dental school	6 (67%)	3 (33%)
University not within a dental school	16 (84%)	3 (16%)

P<0.0001

**Figure 3.** Total contact hours per week



institution, teaching during non-contract time, and participation in faculty practices. (Table IV)

Adjusted monthly incomes varied substantially, with with the respondents receiving a mean monthly salary of \$6,726 with a standard deviation of \$1,530. ANOVA analysis determined no statistical statistically significant differences regarding monthly salaries as compared by geographical region. (Table VI) The total number of teaching years had a positive impact on adjusted monthly salaries (p=0.001) with survey respondents receiving an additional \$75.47 per month for each year of experience. When examining the total contract salary, PDs earned \$493.14 more per year for each year of teaching experience (p=0.017). Table VII shows that PDs holding a doctorate degree earned higher salaries than PDs with a master's degree or those progressing toward a doctorate degree (p=0.001). Adjusted monthly salary and total salary compensation for PDs when compared to the number of years in their current position and institution type was not significantly different.

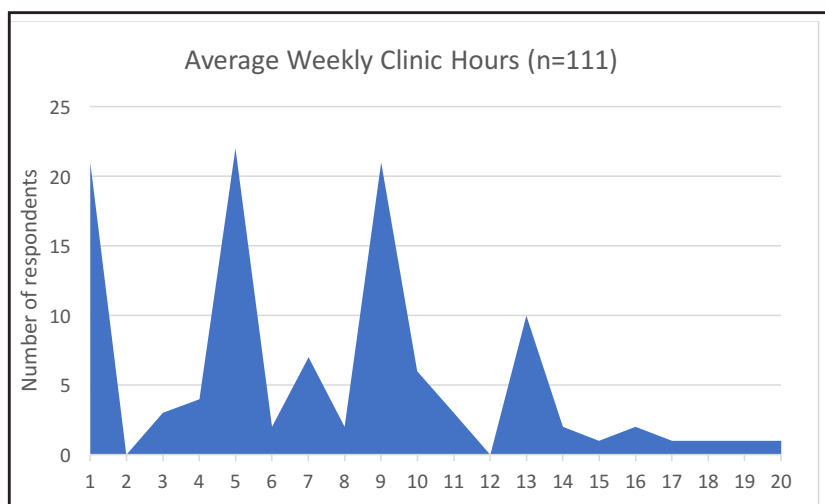
Employee benefit packages varied. One hundred percent of the respondents reported receiving medical insurance, 93% were offered dental insurance, and 91% received life/disability insurance. The majority of respondents (92%) indicated employer contributions to a retirement account with average contribution levels ranging from 3-10%. (Table VIII).

**Table IV.** Contract salary, length, and additional Income

Contract Salary (n= 70)	n (%)
<\$40,000	3 (4%)
\$40,000-49,999	2 (3%)
\$50,000-59,999	5 (7%)
\$60,000-69,999	24 (34%)
\$70,000-79,999	9 (13%)
\$80,000-89,999	15 (21%)
\$90,000-99,999	8 (11%)
>\$100,000	4 (6%)
Contract Length (n=103)	n (%)
9 mos	20 (19%)
10 mos	13 (13%)
11 mos	13 (13%)
12 mos	57 (55%)
Additional Pay Received for:	n (%)
Administrative duties	30 (25%)
CE courses	22 (18%)
Additional Service to institution	13 (11%)
Teaching during non-contract time	35 (28%)
Faculty practice participation	5 (4%)

Eighty-eight percent reported receiving institutional funding for travel to professional conferences; 65% reported receiving up to \$1,500 annually and 15% received \$3,000 or more. (Table VIII). Sixty-seven percent reported that their employer supports the pursuit of advanced degrees with 47% receiving financial support, 15% release time, and 30% received a combination of release time and funding.

**Figure 4.** Average weekly clinic hours

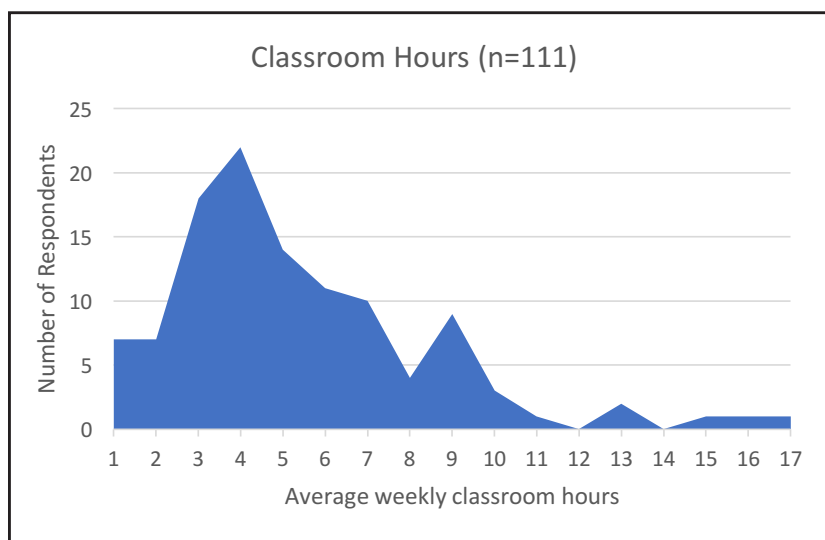


**Table V.** Average contract length in months based in institution type. (n=103)

	Contract Length in Months	Standard Deviation (+/-)
Technical School (n=16)	11.3	.294
Community College (n=60)	10.8	.152
University within a dental school (n=9)	12	.392
University not within a dental school (n=18)	11.2	.277

P=0.031

**Figure 5.** Average weekly classroom hours



(Table VIII) Sixty-four percent (n=71) indicated receiving 3-6 weeks off during their contract time annually while some outliers reported having 14 to 16 weeks off during their contract. (Figure 7)

### Discussion

Results from this study support the existing literature regarding the potential shortage of dental hygiene educators and more specifically PDs due to retirement as evidenced by the findings that 46% of PDs surveyed have held their position for three years or less and 35% anticipate retiring in the next 5 years. The recent ADEA survey does separate projected retirement rates between PDs and faculty members.<sup>9</sup> A high number of new PDs with fewer than three years in their current position, may be indicative of an increased PD turnover rate in recent years. These findings concur with previous research concluding that increasing numbers of PDs have either retired or otherwise vacated their positions, and that there are many new PDs in dental hygiene education settings.<sup>1</sup> The majority of the respondents in this study indicated a requirement of a master's degree to hold the position of program director which is consistent with CODA standards.<sup>14</sup> Considering that approximately one third of the dental hygiene education workforce currently only holds a bachelor's degree as their highest credential,<sup>9</sup> these individuals will not be qualified to assume the PD positions that are predicted to be vacant in the next five years.

Unlike previous ADEA Allied PD surveys, this study examined number of hours per week dedicated to specific activities rather than percentages of time.<sup>9</sup> Total contact hours were separated into clinical and classroom time. PDs can expect an average workweek of between 40 and 50 hours similar to that of full-time faculty members. These findings are similar to Collins et al. demonstrating that full-time baccalaureate faculty work approximately 50.5 hours a week, with the majority of this time spent teaching undergraduate students.<sup>21</sup> However, Hinshaw et al. found the dental hygiene program administrators, including PDs, commonly experience personal and professional patterns of stress and burnout.<sup>22</sup> Sources of professional stress include unsupportive administrators, faculty conflicts, staffing shortages, student issues, accreditation procedures, heavy teaching loads and limited resources.<sup>22</sup> Clearly defined PD roles and responsibilities

**Table VI.** Mean adjusted monthly salary by region of the country. (n=68)

Region of the Country	Mean Monthly Salary	Standard Deviation (+/-)
South (n=21)	\$6,110	\$411
Mid-Atlantic (n=6)	\$6,148	\$768
Mid-West (n=19)	\$6,311	\$432
West (n=15)	\$6,980	\$486
New England (n=3)	\$7,145	\$1,086
Southwest (n=4)	\$8,264	\$941

p=0.316

\*For this table, authors divided the dollar amount of contract salary by the number of contract months to determine an adjusted monthly salary.

**Figure 6.** Contract salary in thousands



**Table VII.** Average annual salary by highest degree held. (n=68)

Highest Degree Held	Mean Annual Salary	Standard Deviation (+/-)
Master's Degree (n=47)	\$71,198	\$2,151
Doctorate Degree (n=17)	\$86,741	\$3,577
Progress Toward a Doctorate (n=5)	\$66,200	\$6,596

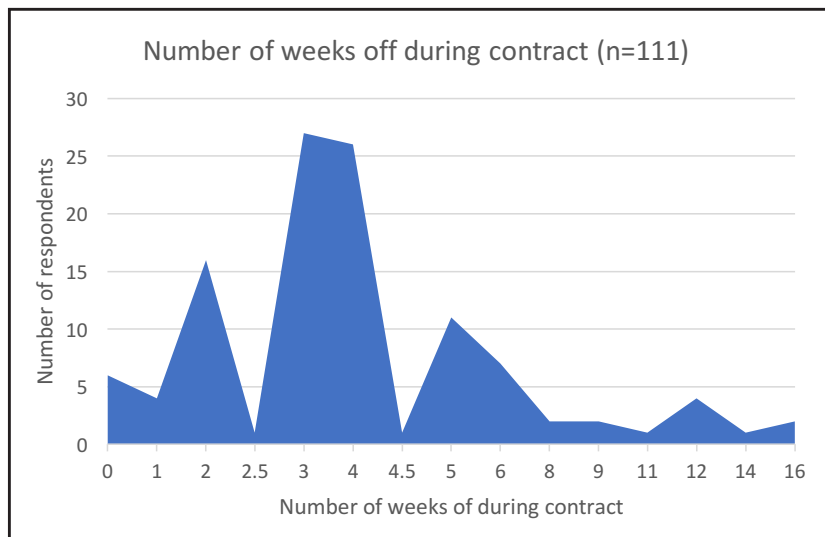
p=0.001

along with incorporation of stress management strategies should be a part of PD retention and recruitment strategies.<sup>22</sup>

Transitioning from a full-time faculty position to a program director position should ideally entail a shift of duties rather than a significant increase in total working hours. With an average 11.4 total contact hours per week, program directors continue to have a great deal of direct contact with students. Time spent on scholarly activity varied significantly with a higher number of PDs in university settings still required to engage in scholarly activity in addition to their administrative duties however continuing education and professional presentations were the most frequently selected options over submissions to peer-reviewed publications. This trend may be indicative of a movement from the more traditional view of scholarship to an environment that embraces Boyer's model of discovery.<sup>23</sup> Faculty scholarship as described by Boyer includes the discovery of new knowledge, integration of knowledge across disciplines, application of knowledge in addressing problems in society and the professions, and the development of teaching models, practices and approaches to achieve optimal learning.<sup>23</sup> While there appears to be more flexibility in the range of acceptable scholarly activity, future PDs should expect more requirements in this area when pursuing positions in university settings.

With respect to compensation, the more detailed results from this survey were consistent with average salaries of PDs as reported by the most recent ADEA survey.<sup>9</sup> A PD can expect to earn between \$60,000 and \$79,000 per contract salary depending on experience and the educational institution, with contracts ranging from 9-12 months. No significant differences in salaries were identified between different types of educational institutions or geographic regions of the country in spite of the assumption that with regional variations in the cost of living across the U.S. would influence compensation. However, there was a significant correlation between salary and number of years

**Figure 7.** Number of weeks off during contract



**Table VIII.** Additional benefits of program director positions

Does your employer...	n (%)
Provide group medical insurance? (n=111)	111 (100%)
Provide group dental insurance? (n=108)	100 (93%)
Provide life/disability insurance? (n=111)	101 (91%)
Contribute to a retirement account on your behalf? (n=111)	102 (92%)
For retirement account contributions, is there a matching requirement? (n=102)	68 (67%)
Does your employer provide money for travel to professional conferences? (n=111)	98 (88%)
<b>How much money is provided for travel each year? (n=80)</b>	
<\$500	18 (23%)
\$500-1000	19 (24%)
\$1,000-1,500	14 (18%)
\$1,500-2,000	9 (11%)
\$2,000-2,500	7 (9%)
\$2,500-3,000	1 (1%)
>\$3,000	12 (15%)
Does your employer provide support for pursuit of advanced degrees? n=111	74 (67%)
<b>In what way does your employer support the pursuit of advanced degrees? (n=74)</b>	
Financial support	35 (47%)
Release time	11 (15%)
Both	22 (30%)
other	6 (8%)

of educational experience and higher educational credentials. Based on this information, it may be assumed that a PD applicant with experience as an educator and a doctoral degree would command a higher salary regardless of the geographic location of the educational institution.

Employer provided benefit packages, an area not previously studied, demonstrated that the majority of the respondents were provided medical and dental insurance as well as life or disability insurance. In addition, most employers contributed to a retirement account on the employee's behalf and provided some level of an allowance for travel to professional conferences. However, it is worth noting that the travel allowances were relatively low and cover limited travel opportunities to professional conferences regardless of their location. Attending professional conferences is a particularly important aspect of being PD with benefits ranging from networking with other leaders in the profession to increasing the visibility and reputation of the dental hygiene program.

Limitations of this study include its sample size of 122 respondents as compared to the 2016 ADEA Allied Dental Program Directors survey. However, the limited generalizability of the results due to a smaller sample size can be mitigated by the additional detail collected on PD duties. Additionally, there were two questions with significant outliers in the survey results; the number of weeks off during contract period; and the employer contribution to retirement. These outliers may be due to misinterpretation of the question. Figures have been provided to visually represent all of the responses allowing for visualization of the data peaks.

Future research on this topic could include further investigation into identifying the skill sets required for success as a dental hygiene PD. Following a round table discussion held at the 2016 ADEA annual session led by the study authors, soft skills and types of professional development activities designed to assist interested candidates in preparation for the role of PD were identified. Responses included: conflict resolution and management among both students and faculty members; negotiation skills, specifically the ability to handle mid-level management; and leadership development.<sup>24</sup> Considering that open program director positions are commonly



filled by promoting qualified faculty members already employed by the institution, additional professional development in the identified areas may assist all candidates in preparation for a PD role. Another aspect of future study would be to survey PD as well as full-time dental hygiene faculty members regarding their job satisfaction similar to what has previously been done for dental faculty members.<sup>25</sup>

## Conclusion

A position profile detailing the range of employment expectations for dental hygiene program directors has been created and can serve as a detailed guide to inform and recruit potential program directors. Strategies to recruit qualified individuals into the program director position should be explored to ensure dental hygiene education continues to have highly qualified leaders.

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