

Terms of Clearance: Learner's Perception Survey, 2900-0691

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Factors Associated with the Satisfaction of
Millennial-Generation Dental Residents with their
Training Experience

This document is in reference to the non-response bias analysis requested by OMB. OMB made a second request for the lead Statistician to expound on their previous response, by providing more detail.

TITLE PAGE

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ABSTRACT

Data from the 2010 Learners' Perceptions Survey (LPS) administered through the Office of Academic Affiliations, Department of Veterans Affairs (VA), were analyzed to identify factors associated with dental residents satisfaction with VA as a clinical training environment. Satisfaction scores were linked to clinic workloads, dental procedure complexity levels, staffing patterns, and facility infrastructure data to explore conditions that may improve residents' satisfaction. Findings supported the construct validity of the LPS survey data and underscored the importance of maintaining optimal ratios of attending dentists, dental assistants, and administrative staff per resident so that each trainee will have opportunities to perform an adequate level of dental workload. As programs strive to improve the quality of graduate dental education, findings from this study are vital for setting curriculum design guidelines and to providing infrastructure support to dental resident education.

KEY WORDS

Productivity, dental assistant, operatory, workload, dental resident, graduate dental education, employee satisfaction

TEXT: FACTORS ASSOCIATED WITH THE SATISFACTION OF MILLENNIAL-GENERATION DENTAL RESIDENTS WITH THEIR TRAINING EXPERIENCE

BACKGROUND AND INTRODUCTION

The Department of Veterans Affairs (VA) has become one of the largest providers of post-graduate education in the United States, second in funding for graduate medical education only to the Centers for Medicare and Medicaid. Each year, VA funds over 360 full-time equivalent positions for dental residents in General Dentistry and dental specialties. VA also assists in the training of dental hygienists, dental assistants, dental laboratory technologists, and other dental auxiliaries in many of its 200+ modern facilities.¹ In the last five years, nearly 900,000 unique Veterans have received dental care in a VA facility, and one-third of their clinical encounters with a dentist have involved a dental resident. Dental residents, as part of their post-graduate training, rotate through VA medical centers and assist in providing care to patients under the direct clinical supervision of VA staff dentists. As a result of that clinical experience, many of these dental residents go on to choose part- or full-time employment with VA.

All VA dental residency programs are fully accredited. Residents rotating through VA dental clinics gain experience in a wide range of challenging dental procedures, working under the close supervision of highly skilled general and specialty attending faculty.² In addition to clinical supervision and direct mentoring, residents receive ongoing education through conferences, web-based training, and participating in specific VA programs and research activities. Upon completion of their training, dental residents often seek permanent VA employment; in 2009, 43% of staff dentist providers reported obtaining at least part of their training in VA facilities.³ As Millennials tend to be

socially committed, many may seek VA employment to serve Veterans who have served our country.⁴

For the purpose of this report, we define Millennial-Generation (or Gen-Y) residents as those who were born after 1978. Many are entering dental residency training programs taught by Baby Boomers, and to a lesser extent, Gen-X faculty. Recognizing that a significant generation gap in culture, values, and motivators exists between the Baby Boomers and Millennials,⁵ designing curriculum to meet the Millennials' needs and to attract them to work for VA after training requires an understanding of this new generation's satisfaction factors. The Office of Academic Affiliations (OAA) strives to improve dental residents' satisfaction through closely monitoring the breadth, volume, and quality of dental procedures performed by dental residents. To gain additional insight into the resident experience, OAA also conducts the VA Learners' Perceptions Survey (LPS), a voluntary, anonymous, web-based survey administered annually since 2001,. The survey is administered to both dental and physician residents, as well as to nursing and associated health trainees, who rotated through a VA medical center from an approved training program.⁶ The present study was designed to explore the satisfaction factors of dental residents who rotated through a VA medical center in 2010. Data is derived from dental residents' responses in the VA's Learners' Perceptions Survey (LPS).

Hypotheses & Research Questions

The literature shows that upon completion of a graduate dental residency program, the average trainee has incurred debt of over \$165,226.⁷ Dental residents, who spend additional post-graduate years to advance their clinical skills through

exposure to a wide range of dental procedures and challenges will do so by forgoing opportunities to earn income by not entering dental practice directly upon graduation.⁸ Thus, residents are expected to avoid performing non-clinical functions, such as preparing operatories, coordinating follow-up appointments for patients, or answering phone calls. In this paper, we hypothesized that sufficient administrative and auxiliary support at the dental clinics would spare residents from performing non-clinical functions and assure satisfaction. Likewise, we also hypothesized that residents would be satisfied if they had sufficient exposure to high-complexity procedures.

In order to inform program administrators and policy makers concerning development of dental resident training guidelines, we examined the hypotheses that dental clinic workload, staffing support, and clinic infrastructure will impact dental resident satisfaction ratings with their clinical training and working environments. Workload is measured as the number of dental procedures, the complexity of those procedures, relative resident and overall clinic productivities, and the percentage of total workload performed by residents. Staffing support is measured using two ratios: dental assistants to dentists and clinic clerks to dentists. Infrastructure support is measured using the ratio of dental operatories to dentists. If associations existed, we further tested to see if these associations are monotonic across the range of workload and staffing support to detect if stable optimal levels exist that maximize satisfaction rates.

METHODS

Study Design

Study data is derived from the Department of Veterans Affairs Learners' Perceptions Survey (LPS) administered to all dental resident trainees who rotated through a VA medical facility in AY 2010.

The LPS is an Office of Management and Budget approved,⁹ standardized, web-based survey designed to assess the satisfaction of health professions trainees who rotate through a VA medical center during each academic year. These rotations are covered under affiliation agreements between the VA and accredited sponsoring hospitals or university-based education programs. The Veterans Health Administration Office of Academic Affiliations (OAA) has administered the LPS annually since 2001 for evaluative, regulatory, program administration, and policy-making purposes under its National Evaluation Workgroup. The LPS has good internal consistencies (α 's ranging from 0.87 to 0.92), which have been validated for discriminant validity across clinical specialties^{10,11, 12} and for construct validity.¹³

For purposes of this study, we examined two LPS environments across six domains involving a total of 75 element questions. Specifically, we focused on the learning environment (comprising clinical learning and training experience) compared to non-VAs, faculty/preceptor domains, and the working environment (comprising work, physical, and personal experience domains). Each domain consists of an overall summary question that is asked following responses to 9 to 15 element questions about specific items that define the domain. All questions are asked on a five-point Likert scale.

Descriptive analyses were first performed to explore the six domains of the LPS. The frequencies of negative responses were tallied to identify areas that need

improvements. To assess the relative importance of the six domains with the overall satisfaction, a linear regression model was constructed using the overall satisfaction score from 1 to 100 as the dependent variable, and the six domain scores as the independent variables.

The relative importance of each detailed question under one domain was assessed by constructing logistic regression models using each domain score as the dependent variable and scores for each question as the independent variables. After merging the LPS individual scores with facility-level staffing, operatories, workloads, and dental procedure complexity data, the data were clustered by facility for analyses. Variations among the significant LPS factors were then explained by the workload, complexity of dental procedures, staff support, operator ratios, and percentage of workload performed by residents through logistic regression models clustered by clinics.

This research was granted an exemption from Institutional Review Board (IRB) oversight, as the information obtained precluded identification of individual subjects; furthermore, the research itself was non-interventional, occurring in established education settings and involving usual education practices.

Data Sources

The LPS data for academic year (AY) 2010, from July 1, 2009 to June 30, 2010, was provided by the Office of Academic Affiliations. Analyses were limited to dental residents' responses. The 5-point Likert-scale scores ranged from 1 to 5, where 5 indicated "very dissatisfied" and 1 indicated "very satisfied." Workload data for the same academic year 2010 was obtained from VA's Dental Encounter System (DES). Dental procedures in DES are coded using standard CDT/CPT codes and collected at

the encounter level. If one patient is treated by two providers at a single dental visit, there are distinct encounter records created to reflect the workload for each provider. Additionally, individual dental procedures are mapped to a standardized Relative Value Unit (RVU) representing the relative work effort, time, and complexity of the procedure. Dental staffing data were obtained as cumulative fulltime employee equivalents (FTEE) from payroll data. Available operatory data was obtained from each facility in a self-reported survey.

Dental procedures were categorized into three industry standard complexity levels by CDT/CPT codes: basic/preventive procedures, minor procedures, and major procedures. Examples of these three complexity level procedures are exhibited in Table 1. The relative percentages of procedural complexity (total RVUs of major procedures/total RVUs) were derived at the clinic level to reflect the complexity level of procedures available to residents either by observation or hands-on operation.

RESULTS

In AY2010 (June 30, 2009 to July 1, 2010), 184 dental residents responded to the LPS, yielding a response rate of 52%. Data included 74 survey respondents who completed their rotations before the end of AY2011. The respondents were 56% male and 44% female. The majority (93%) of the respondents rated their recent VA clinical training experience as "Very good" or "Excellent."

To examine issues of validity raised with our 52% response rate, we assessed the validity of LPS domain responses by estimating linear regression models that were designed to compare the six domains representing training and working environments

on an overall VA experience satisfaction scale. The VA experience scale was computed on a 100-point scale provided with the LPS survey data. Here, higher scores indicate greater satisfaction. Respondents were informed that a “passing” score is 70. Among these respondents, 82% rated their experience at 80 or above, with an overall average score of 86.6. As presented in Table 2, three domain scores (clinical faculty/preceptors, VA clinical training experience against non-VA, and working environment) explained 70% of the explained variance of these 100-point VA experience satisfaction scores.

Every detailed question under each domain significantly correlated with its overall domain score, attesting to the validity of the survey questions. We constructed logistic regressions using the binary domain score as the dependent variable and scores from the detailed questions under each domain as independent variables. The results are presented in Tables 3 through 8.

The results of this study are further discussed under the context of each of the six survey domains.

Domain of Learning Environment

The domain of learning environment significantly correlated with the overall satisfaction ($r=0.78$, $t < 0.001$); however, when controlling for the impact of other domains, its relative impact was not statistically significant. Within this domain, six aspects explained 76% of satisfaction variations for learning the environment: (1) Amount of non-educational (“scut”) work, (2) Preparation for future training, (3) Time for learning, (4) Access to specialty expertise, (5) Culture of patient safety, and (6) Spectrum of patient problems. “Preparation of business aspects of clinical practice”

scored the lowest, with 60% responding “Somewhat satisfied” or “Very satisfied,” and residents did not consider this aspect as relatively important to their satisfaction. The “Amount of non-educational (“scut”) work” significantly impacted the satisfaction score of this domain, with satisfaction in this aspect scoring relatively low (76%, Table 3). Since clinic clerks and dental assistants perform non-dentist tasks of coordinating patients and preparing instruments, their staffing ratio to dentists were analyzed. The ratio of assistants to dentists significantly impacted the overall learning environment satisfaction score (Wald Chi-Square =5.16, $p=0.02$), but satisfaction of this domain had no association with the clerks-to-dentists ratio or with the operatory rooms-to-dentists ratio.

Domain of Physical Environment

Physical environment associated significantly with the overall satisfaction score ($r=0.64$, $p<0.0001$), despite its relative insignificance when controlling for other domains. Within this domain, five detailed questions impact the satisfaction significantly: (1) Availability of needed equipment, (2) Heating and air conditioning, (3) Facility cleanliness/housekeeping, and (4) Availability of food at medical center when on call (Table 4). The low score of parking (63.3%) did not impact the satisfaction of residents as significantly as heating and air conditioning (79.3%), perhaps because room temperature arouses discomfort for a longer period of time than the short duration of frustration searching for a parking space. The relatively low satisfaction for the “availability of food at medical center when on call” (65%) has been noted from previous surveys, as many VA cafeterias close prior to dinner time. Since dental assistants typically prepare the treatment room, dental equipment, and instruments for dentists,

the dental assistant-to-dentist ratio was analyzed further to explain the variations on the satisfaction score of “Availability of needed equipment.” The finding showed no association. Thus, it appeared that the dissatisfaction was due to the physical unavailability of necessary equipment rather than ready access to equipment as facilitated by the dental assistants.

Domain of Working Environment

This domain significantly impacts overall resident satisfaction and therefore warrants close monitoring. As Millennials value a team environment, “Peer group morale” impacts the satisfaction significantly. This area scored a high 90%. The other two aspects that significantly impact the working environment satisfaction were “Orientation Program” and “Workspace.” (Table 5) Work space received an 88% rate of “Somewhat satisfied” or “Very satisfied” ratings. In VA dental clinics, the average ratio of operator to dentist, including residents, is one to one, which was below the optimal ratio of two to one from a productivity perspective, but was not low enough to cause dissatisfaction from residents.

Satisfaction ratings for "Ancillary/support staff" and "Orientation program" both scored relatively low. These two low scores were associated with “amount of scut work” in the “Physical Environment domain” ($r > 0.46$, $p < 0.0001$), indicating areas for improvements. To explore further, the ratio of dental assistants to dentists was used as a proxy for ancillary support. Analyses were done by using ancillary/support staff morale score as the dependent variable and dental assistants-to-dentists ratio and clinic clerks- to-dentists ratio as the independent variables in a logistic model clustered by clinics. The dental assistant ratio showed significant positive impact on the

ancillary/support staff morale score (Wald Chi Square = 5.408, $p=0.0201$), but no impact by the clinic clerks-to-dentists ratio. This indicated that dental assistants play a more significant role in providing ancillary support than clinic clerks do. Without an effective orientation program and supportive ancillary staff, residents can waste time acclimating to a new clinic environment.

It is widely accepted that the Millennial generation is computer savvy. Because a VA has long been known in the healthcare industry for its advanced computerized patient record system (CPRS), it was hypothesized that VA's CPRS contributes to high satisfaction among residents. Nevertheless, despite the fact that satisfaction scores were high (91.5%) for CPRS, this element did not significantly impact the working environment satisfaction. Our results suggest that the Millennial Generation takes advanced computer technology for granted and that computer technology has become a "hygiene" factor. That is, the presence of technology does not impact satisfaction, but the absence of it could certainly produce dissatisfaction.¹⁴

Domain of Personal Experience

The Personal Experience Domain was associated significantly with the overall satisfaction score ($r=0.77$, $p<0.0001$). The rating for personal experience at VA was high, with 94% of respondents rating their experience as "Somewhat satisfied" or "Very satisfied." Factors significantly impacting the satisfaction of this domain include (1) Personal support, (2) Personal award, and (3) Ownership and responsibility for patients' care, (Table 6). These results supported literature findings for the Millennial generation. They pursue opportunities to expand their skills and experience, and financial incentives

are less of a motivator than for older generations who had lived through recession and depression. The Millennial generation is often called the “Trophy” generation, being reared with constant and immediate praise and rewards.¹⁵ Millennials demand a lot of personal attention. It is likely that they will leave if they do not receive adequate attention and recognition; therefore, the amount and frequency of feedback that they receive from faculty may play an important role in their satisfaction, workforce recruitment, and retention.¹⁶

In VA teaching clinics, the attending dentist-to-resident ratio averaged 2:1, which was adequate to receive 94% favorable responses for personal support, and 92% for personal award (Table 6). In order to calculate the optimal ratio of attending dentist-to-resident ratio, a logistic regression model was constructed using that ratio as an independent variable. The result showed significant negative impact on satisfaction score of this domain, which was contradictory to our hypothesis that the higher this ratio, the higher the satisfaction score on personal experience.,

Factors not significantly impacting resident satisfaction in the personal experience domain included relationships with patients, continuity of relationships with patients, and the quality of care that the respondent’s patients receive. Additional study would be necessary to determine whether this finding is a function of the transient nature of resident education or whether Millennials view the provider-patient relationship differently than other provider generations. In contrast to literature describing Millennials, factors related to the aspects of “balance of personal and professional life” and “level of job stress” did not appear in this survey as significant.

Domain Comparing the Most Recent VA Clinical Training Experience to Non-VA
Clinical Training Experience at the Same or Equivalent Level

As VA strives to be the employer of choice, information generated in this domain is extremely important for VA's recruitment and succession planning. Overall, respondents rated their VA clinical training experience about the same as their non-VA experience. Forty percent of respondents gave VA ratings of "somewhat better" or "a lot better," but 38% rated their VA and non-VA experience "about the same." These results were consistent with two other survey questions in that respondents were asked to rate VA and non-VA residency programs on a numerical scale of 1-100. The difference was 1.5 points in favor of VA, but was not statistically significant. The literature states that those of the Millennial Generation switch jobs frequently and constantly seek opportunities to strengthen their skills. These descriptions of the Millennial Generation are supported in that the "usefulness of what respondent learned" was significant in impacting satisfaction ($r=0.44$, $p=0.0001$). The other two significant aspects were "Clinical Faculty" and "Working Environment." (Table 7) When analyzed with clinic-level staffing and workload data, two measures significantly impacted the satisfaction scores in this domain positively: residents' total workloads (Wald Chi-Square = 15.01, $p=0.0001$) and clinic clerks-to-dentists ratio (Wald Chi-square = 15.4, $p<0.0001$). Both factors can be monitored to assure satisfaction.

Domain of Clinical Faculty/Preceptors

Similar to other surgical residencies, a dental residency is in large part a procedure-oriented apprenticeship with residents working closely with attending faculty. Most dental residents (94%) were "Somewhat satisfied" or "Very satisfied" with their

dental clinical faculty. Three significant aspects for faculty are: Clinical skills, Interest in teaching, and Quality of faculty. All three areas scored above 85% with somewhat or very satisfied. (Table 8) The area that needs improvement in this domain is the “Research Mentoring,” which had only 65% responses as “Somewhat satisfied” or “Very satisfied.”

In VA teaching dental clinics, the average ratio of two faculty attending to one resident is sufficient to allow residents to receive timely feedback and adequate mentoring; however, the higher attending-to-resident ratio, the lower the satisfaction score in this domain.

Association of Clinic Staffing Patterns, Procedure Complexity with Overall Satisfaction

Staffing patterns and procedure complexity can be adjusted administratively to assure residents' satisfaction; therefore, logistic regression models were constructed to analyze the association with satisfaction. The results indicated that two clinic staffing ratios significantly and positively impacted the overall score of satisfaction: dental assistants-to dentists-ratio (estimate=16.64, $p=0.0080$, Figure 1), and clerks-to-dentists ratio (estimate = 64.32, $p=0.0099$, Figure 2). It was assumed that residents could receive more personal attention when attending dentists-to residents-ratio was high, and have more training opportunities when major-complexity level of dental procedures was high. We, therefore, hypothesized both factors be positively associated with residents' satisfaction. Contrary to the hypotheses, the attending dentists-to-residents ratio was associated negatively with the overall satisfaction score (estimate = -1.86, $p=0.0002$), and the percentage of dental procedures with major-complexity level had no impact with residents' overall satisfaction scores. Reasons for these surprised findings

were explored further. The results showed that the attending-to-resident ratio was negatively associated with the proportion of clinic workload done by residents ($r=-0.48$, $p<0.0001$), which indicated lesser chance for residents to provide dental care to patients when the ratio is high. Non-resident dentists' workloads consist of an average of 37% major complexity dental procedures, which was significantly higher than the average 32% of major complexity dental procedures done by residents.

Association of Productivity with Resident Satisfaction

Millennials have been described to work best in a "team" environment, while Baby Boomers tend to pursue individual accomplishments.¹⁴ The "Team" productivity for each dental clinic was explored to examine the association with residents' satisfaction. The total RVUs produced by the clinics were divided by the FTEE (full time employee equivalent) of the total staff dentists plus the total number of residents). The results showed that resident-team productivity was negatively associated with residents' overall satisfaction scores ($Z = -2.98$, $p=0.0028$). The cross-sectional study design in this study did not allow any interpretation for causal relation; however, the findings were contrary to the workforce motivation Theory-Y that "Happy workers are productive workers"¹⁵, and were explored further.

After controlling for dental assistants to dentists ratio, clinic team productivity was found to be negatively impacted by the number of residents in the clinics ($Z = -6.95$, $p<0.0001$) and the resident workload-to-total clinic workload ratio ($Z=-2.87$, $p =0.0041$). Staff dentists had 45% higher productivity than residents. The higher the faculty-to-resident ratio, the higher the clinic productivity was; however, the higher the productivity

the lesser percentage of workload performed by residents ($Z=-2.87$, $p<0.0041$), and the lower the residents' overall satisfaction ($r=-0.279$, $p=0.0019$).

Association of Percentage of Workload Done by Residents with Satisfaction

What associated positively with residents' satisfaction scores was the percentage of total workload performed by residents (estimate = 10.9, $p=0.041$, figure 3). While percentage of major procedures indicates the learning opportunities of residents, the percentage of workload done by residents reflected what actually happened at the dental clinics and directly measured the hands-on opportunities with which residents were entrusted and supervised by faculty. The percentage of resident-performed workload impacted the overall satisfaction scores and the following learning aspects: "time for learning," "personal award," "ownership/personal responsibility for patient care," "clinical faculty's interest in teaching," "enhancement of clinical knowledge and skills," "usefulness of what residents learned compared to non-VA," and "VA clinical faculty compared to non-VA training sites" (Table 9 and Figure 3). The percentage of workload done by residents had no significant association with the percent of major dental procedures, which also had no impact on overall satisfaction. In year 2010, on average, dental residents performed 36% of workload in VA dental clinics, with a median of 40% and a maximum of 63%. Since our dataset is cross-sectional and non-causal, the highest ratio was associated with the highest satisfaction, we were not able to estimate the optimal ratio of the portion of workload distributed to residents.

CONCLUSIONS

The purpose of this study was to explore the impact of workload and staffing data on factors associated with Millennial-Generation dental residents' satisfaction. This

study is especially important. During the coming decade, VA's workforce will increasingly depend on Millennial generation residents to fill positions vacated by retiring Baby Boomers. Hence, the satisfaction of Millennial generation residents is likely to impact recruitment.

Overall, on a scale of 1-100, dental residents gave an average score of 86.6 for their VA clinical experience and an average score of 85.1 for their non-VA training. Three domains were shown to demonstrate significant impact on the overall dental residents' satisfaction: (1) Working environment, (2) Ratings of clinical faculty/preceptors, and (3) Comparison of VA clinical training experience with non-VA. Two staffing ratios were positively associated with the overall satisfaction: the ratio of dental assistants to dentists and the ratio of clinic clerks to dentists. In our previous research, the optimal ratio for dental assistants to dentists to maximize productivity is 1.5:1, and the optimal clerical staff to dentist ratio to maximize productivity was 0.57 clerks per one dentist.¹⁸ This study further demonstrates that these staffing ratios are not only important for productivity, but also significantly impact resident satisfaction.

The current ratio of two attending dentists to one resident is adequate to obtain satisfaction on personal support and personal award for residents; however, that ratio was associated negatively with overall satisfaction scores, despite that it reflects the potential of providing higher personal attention and learning opportunities to residents. What was associated positively with the satisfaction scores was the percentage of clinic workload performed by residents, with the highest resident satisfaction score being associated with 63% of workloads being delegated to residents. The residents' workload proportion was negatively associated with the attending-to-resident ratio. The higher

the ratio, the less proportion of workload was distributed to residents and may be the underlying cause for the negative impact of the attending-to-resident ratio on residents' satisfaction.

This study identified the significant elements within each domain of the LPS that had the greatest impact on dental residents' satisfaction. The information should be helpful in designing residency program curriculum and quality assurance programs. Ancillary support of clinic clerks and dental assistants are essential for residents' learning environment. The percentage of workload performed by residents could be used as an outcome measure for the quality of resident teaching as it significantly impacted residents' satisfaction.

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Table 1. Examples of three-complexity levels of dental procedures

Dental Procedure Category	CPT Code	RVU
Preventive and Basic Dental Services	D0120 - PERIODIC ORAL EVALUATION	30
	D0150 - COMPREHENSVE ORAL EVALUATION	45
	D0160 - EXTENSV ORAL EVAL PROB FOCUS	45
	D0170 - RE-EVAL,EST PT,PROBLEM FOCUS	20
	D0180 - COMP PERIODONTAL EVALUATION	45
Minor Restorative Dental Services	D1510 - SPACE MAINTAINER FXD UNILAT	45
	D1515 - FIXED BILAT SPACE MAINTAINER	60
	D1520 - REMOVE UNILAT SPACE MAINTAIN	45
	D2140 - AMALGAM ONE SURFACE PERMANEN	35
	D2330 - RESIN ONE SURFACE-ANTERIOR	35
Major Restorative Dental Services	D2410 - DENTAL GOLD FOIL ONE SURFACE	80
	D2510 - DENTAL INLAY METALIC 1 SURF	100
	D2644 - DENTAL ONLAY PORC 4/MORE SUR	150
	D2650 - INLAY COMPOSITE/RESIN ONE SU	120
	D2652 - DENTAL INLAY RESIN 3/MRE SUR	160

Table 2. Relative impact of the six domains on the overall satisfaction score

Domain	Statistical Significance
Work environment at VA facility	Yes (t=6.34, p < 0.0001)
Clinical Faculty/Preceptors at VA facility	Yes (t=3.58, p = 0.0006)
Comparison of most recent clinical training experience with VA to non-VA	Yes (t=3.48, p = 0.0009)
Personal Experience at VA facility	No
Physical environment at VA facility	No
Learning Environment at VA facility	No

Table 3. Relatively impact of the domain factors on the Learning Environment satisfaction scores

LEARNING ENVIRONMENT	Statistical Significance	% Somewhat or Very Satisfied
Amount of non-educational ("scut") work	Yes (chi-Sq = 9.51, p<0.0020)	76%
Preparation for future training	Yes (Chi-Sq =21.85, p<0.0001)	92%
Time for learning	Yes (Chi-Sq=4.95, p=0.0261)	87%
Access to specialty expertise	Yes (Chi Sq=5.00, p=0.0252)	89%
Diversity of Patients	Yes (Chi-Sq = 3.66, p=0.0557)	88%
Culture of patient safety	No	94%
Spectrum of patient problems	No	96%
Working with patients	No	96%
Degree of supervision	No	91%
Degree of autonomy	No	94%
Interdisciplinary approach	No	88%
Preparation for clinical practice	No	91%
Preparation of business aspects of clinical practice	No	60%
Teaching conferences	No	84%
Quality of care	No	94%

Table 4. Relative impact of the domain factors on the Physical Environment satisfaction scores

Physical Environment	Statistical Significance	% Somewhat or Very Satisfied
Availability of needed equipment	Yes (Chi-Sq=4.31, p=0.0379)	83%
Heating and air conditioning	Yes (Chi-Sq=5.24, p=0.0221)	79%
Facility cleanliness/housekeeping	Yes (Chi-Sq=8.72, p=0.0032)	83%
Availability of food at medical center when on call	Yes (Chi-Sq=5.78, p=0.0161)	65%
Lighting	No	91%
Convenience of facility location	No	94%
Parking	No	63%
Personal safety	No	92%
Availability of phones	No	94%
Maintenance of equipment	No	82%
Facility maintenance upkeep	No	85%
Call rooms	No	82%

Table 5. Relative impact of domain factors on Working Environment satisfaction scores

Working Environment	Statistical Significance	% Somewhat or Very Satisfied
Faculty/preceptor morale	Yes (t=3.01, p=0.0029)	89.9%
Peer group morale	Yes (t=5.59, p<0.0001)	89.8%
Ancillary/support staff	Yes (t=5.78, p<0.0001)	71.5%
Orientation program	Yes (t=4.28, p<0.0001)	77.2%
Computer access	Yes (t=5.87, p<0.0001)	90.2%
Internet access	Yes (t=6.43, p<0.0001)	88.5%
Ancillary/support staff morale	No	71.5%
Laboratory services	No	84.8%
Radiology services	No	81.1%
Call schedule	No	88.6%
Computerized Patient Record System (CPRA)	No	91.5%
Library services	No	79.9%
Workspace	No	87.8%

Table 6. Relative impact of domain factors on the Personal Experience at VA facility satisfaction scores

Personal Experience	Statistical Significance	% Somewhat or Very Satisfied
Personal support	Yes (Chi-Sq=5.45, p=0.0195)	94%
Personal award	Yes (Chi-Sq=5.39, p=0.0201)	92%
Ownership/personal responsibility for respondent's patients' care	Yes (Chi-Sq=4.94, p=0.0263)	94%
Quality of care respondent's patients receive	No	96%
Relationship with patients	No	97%
Enhancement of respondent's clinical knowledge and skills	No	94%
Appreciation of respondent's work by faculty	No	87%
Appreciation of respondent's work by patients	No	98%
Level of fatigue	No	85%
Balance of personal and professional life	No	93%
Enjoyment of respondent's work	No	94%
Level of job stress	No	86%
Continuity of relationship with patients	No	91%

Table 7. Relative impact of the domain factors on VA Clinical Training Experience compared with non-VA satisfaction scores

VA Clinical Training Experience compared with non-VA's	Statistical Significance	% Somewhat or a lot better than non-VA
Clinical faculty	Yes (Chi-Sq=17.78, p<0.0001)	34%
Usefulness of what respondent learned	Yes (Chi-Sq=6.22, p<0.0126)	43%
Working environment	Yes (Chi-Sq=4.73, p<0.0296)	39%
Learning environment	No	39%
Degree of supervision	No	41%
Faculty staff	No	34%
Physical environment	No	33%
Degree of autonomy	No	44%
Quality of care	No	36%

Table 8. Relative impact of the domain factors on Clinical Faculty/Preceptors satisfaction scores

Clinical Faculty/Preceptors	Statistical Significance	% Somewhat or Very Satisfied
Clinical skills	Yes (Chi-Sq=4.23, P=0.0395)	97%
Interest in teaching	Yes (Chi-Sq=5.04, p=0.0247)	87%
Quality of faculty	Yes (Chi-Sq=5.49, P=0.0190)	89%
Mentoring by faculty	No	88%
Evidence-based clinical practice	No	88%
Timeliness of feedback	No	93%
Teaching ability	No	90%
Research mentoring	No	65%
Accessibility/availability	No	90%
Approachability/openness	No	94%
Fairness in evaluation	No	94%
Role models	No	90%
Patient-oriented	No	94%

Table 9. Factors associated with the percentage of workload done by residents

Satisfaction Aspects	Linear Association	P Value
Overall Satisfaction Score	0.22	0.023
Time for Learning	0.14	0.039
Personal Experience at VA facilities	0.21	0.001
Personal Award	0.19	0.003
Ownership/Personal responsibility for patient care	0.19	0.003
Clinical Faculty interest in teaching	0.19	0.002
Enhancement of clinical knowledge and skills	0.16	0.017
VA Clinical faculty compared to non-VA	0.30	0.012
Usefulness of what learned compared to non-VA	0.25	0.043





