The Aging and Diminishing Dental Faculty


Abstract: A dire need for additional dental educators is emerging. This article reflects on the heavily skewed age groups of our current dental educators and the lack of sufficient new faculty to undertake the tasks of faculty members. A literature review is presented of previous studies monitoring the current demographics of dental faculty, projected trends, and factors that influence an individual’s career choices concerning dental education involvement. Both intrinsic and extrinsic factors are explored to offer potential avenues for interesting, recruiting, and retaining qualified individuals as dental faculty. The goal of this article is to stimulate thought-provoking discussions and/or solutions within academic dentistry in regard to the question: Who will be our dental school faculty in the next decade?

Concerns over the shrinking pool of dental educators and the even more elusive group of individuals who entertain the thought of entering dental education continue to be fodder for dental school administrators’ nightmares and the preferred topics for position papers by professional organizations. Compounding the problem of the minimal number of dentists entering academia full-time is the aging of the current dental faculty and the potential leadership vacuum in the near future caused by the retirement of an entire generation of mentors. As dentistry becomes more complex with the advancement of science, the number of individuals needed to pass on the information necessary to practice our profession is declining dramatically. This loss of experience will certainly impact basic science education, clinical science education, patient care, and research and scholarly activities.

Comparing dental educator attrition to the “tip of the iceberg” cliché is not inappropriate. Extrapolating recruiting trends out several years in combination with the aging of the dental faculty makes for a precarious position for the long-term effectiveness of dental education. Factors touted as causative agents range from diminished interest in teaching to inability to compete with the private sector monetarily. It is important for educators and administrators alike to evaluate the decreasing trends of faculty recruitment and retention in order to correct this crisis situation.

This review will examine literature from 1990 to the present regarding the national attrition and aging of the dental faculty. Although the majority of the articles are from the Journal of Dental Education, literature from other journals is used as well. The review addresses the following topics: reasons given for entering and leaving academia, minority faculty recruitment, and faculty development, with an emphasis on the interplay of these topics on the status of the dental faculty.

Current Status of the Dental Faculty

To consider the future implications for the dental faculty, an assessment of the current status of the faculty is warranted. Surveys of vacant faculty positions conducted by the American Dental Education Association in 1999-2000, 2000-01, and 2001-02 received results from forty-five, fifty, and fifty-four dental schools respectively.1,2 As a baseline, there were 11,332 total faculty with 4,758 full-time posi-
tions and 6,476 part-time positions during 2000-01. Results from the 1999-2000 survey showed 290 vacancies divided into 239 full-time, thirty-five part-time, and sixteen not indicated. The 2000-01 survey revealed 335 vacant faculty positions consisting of 283 full-time vacancies, fifty part-time vacancies, and two not indicated. In 2001-02, there were 344 vacant positions with full-time positions totaling 273 and part-time positions totaling seventy-one. Only a percentage of these open positions were under active search. Of the 335 open positions noted in 2000-01, only 269 were under active search, and of the 344 open positions in 2001-02, only 250 were under active search. The length of time positions remain vacant also is cause for concern. Thirty percent of the unfilled faculty positions in the 2000-01 academic year had been vacant between seven and twelve months. Twenty-nine percent of the unfilled faculty positions in the 2001-02 academic year had been vacant between seven and twelve months. Twenty percent of the open positions in the 2001-02 academic year had been vacant for more than twelve months. Among the 239 full-time vacancies in 1999-2000, there were 196 open positions in the clinical sciences, but only twenty were open in basic sciences with the remaining twenty-three open full-time positions in the behavioral sciences and other disciplines. In 2000-01, there were 201 open full-time clinical positions and nineteen basic science positions; and in 2001-02, there were 194 open full-time clinical positions and twenty basic science positions. Eight schools reported ten or more open positions in 1999-2000, with fifteen schools in the 2000-01 and fourteen schools in the 2001-02 surveys.

The discipline hardest hit by vacancies, according to the surveys, was restorative dentistry, with forty-one full-time and fifteen open part-time positions in 1999-2000, thirty-eight full-time and twenty-three part-time positions in 2000-01, and thirty-eight full-time and twenty-six part-time positions in 2001-02. The American Association of Orthodontists and the American Dental Education Association considered this situation serious enough to appoint task forces to research issues important to the faculty shortage.

A heightened level of concern emerges when considering that between 1986 and 1997 the average number of faculty has declined 18 percent. The 2000-01 and 2001-02 surveys requested respondents to identify factors that influenced an institution’s ability to fill vacant positions. Salary limitations were cited as a hindrance to filling positions in 235 vacancies in 2000-01 and 129 vacancies in 2001-02. The inability to meet position or scholarship requirements were cited in 235 vacancies in 2000-01 and 218 vacancies in 2001-02. The most troubling factor noted was the lack of response to the position announcement that was associated with 107 vacancies in the 2000-01 survey and 145 vacancies in the 2001-02 survey.

These vacancies do not appear catastrophic until placed in context relevant to the number of people interested in entering dental education, the relative age of the dental faculty, and the demand for dentists in the private sector. Of the 4,041 graduating dentists in 1998, 0.5 percent expressed interest in academia, which equates to approximately twenty-two incoming faculty if all those interested found teaching positions. Compare that anemic number to the estimated need for 200-260 new faculty per year to maintain the status quo. A recent survey of endodontic residents reported only 16 percent were willing to devote more than 1.5 days per week to dental education.

Because of the minimal interest in entering dental education among new members of our profession, the rate of exit by the senior members of our profession is alarming. Current information places the average age for all faculty at 49.6 years and full-time faculty at 50.6 years. These statistics compare unfavorably with the average ages noted in the 1970s and 1980s. The average ages of faculty in 1975, 1980, 1984, and 1989 were forty-three, forty-four, forty-seven, and forty-seven, respectively. These averages do not express the skewed nature of the age distribution of the existing faculty. When examining all faculty, 50 percent are age fifty or older and 20 percent are age sixty or older. Distribution of the full-time faculty is slightly worse, with 55 percent at age fifty or older and 20 percent at age sixty or older.

Retirement of the age sixty and older segment alone is estimated to produce 900 academic vacancies by the next decade. The percentage of full-time faculty leaving their position due to retirement over the last three academic years was 36 percent in 1999-2000, 34 percent in 2000-01, and 15 percent in 2001-02. Although the impact of retirements appears to diminish in this short survey period from 1999 to 2002, it is expected to increase rapidly over the next decade. This increase can be attributed to the skewed age of the dental faculty as a whole.

The faculty shortage is exacerbated by the increasing demand for dentists to enter private practice. The public’s expenditures on dental services are
being divided among fewer dentists relative to the population. The public’s demand for increasing services, including elective procedures, in a time period when discretionary income is readily available, has produced an economic windfall for the private sector dentist. U.S. dental schools are graduating roughly 35 percent fewer dentists than in the late 1970s and early 1980s, going from approximately 6,300 in that era to 4,000 today. By 2020, the dentist to population ratio is expected to be at levels not seen since World War I. The ratio in 1991 was 60.6 dentists per 100,000. According to the ADA Survey Center in 2001, there are 155,716 active dentists for a national population of 284,797,000 which results in a ratio of 54.7 dentists per 100,000. Another sign of the public’s demand for dental services is that, during the 2001-02 academic year, 53 percent of those who left full-time faculty positions entered private practice, as compared to less than 20 percent during 2000-01 and 23 percent during 1999-2000. The private sector and the educational system will now compete for the best and brightest of our profession to the detriment of both.

### Reasons for Entering and Leaving Dental Academia

Any attempt to understand how the faculty pool has come to this situation requires looking at the reason people enter and leave academia. A study by Shepherd et al. analyzed the variables considered by 280 new dental educators accepting full-time faculty positions. The seven most important reported reasons in order were departmental working environment, benefits, quality of the leadership and administration, educational resources and facilities, opportunities for professional development, reputation of the program or faculty, and salary. A survey of orthodontic faculty found that student interaction, desire to contribute to the orthodontic profession, desire to contribute to dental education, intellectual stimulation of dental school, and collegiality with other faculty were the most important reasons to enter teaching. Reasons listed by a survey of oral and maxillofacial surgeons for entering education were: better able to keep up with current advances, interest in teaching, desire to do broader scope of surgery than in private practice, more interesting cases, interest in research, and preference for the university environment.

Schenkein and Best’s survey identified several factors that had a positive impact on an individual’s decision to choose academia. The nine most important positive factors were the opportunity for regular interaction with other faculty dentists, university collegial environment, variety of work activities, desire to be a teacher, interest in science and exploration, opportunity to be on the cutting edge, intellectual challenges and stimulation, opportunity to influence a field of study and shape a profession, and varied life and professional activities. It seems clear that individuals may choose to become faculty due to positive views toward the character of the work environment, the need to contribute to the profession or the knowledge base of the profession, or a desire to educate.

The reasons that an existing educator accepts a position at a different institution are similar to the reasons for accepting the initial teaching position. Kula et al.’s article regarding orthodontic faculty cited student contact, intellectual stimulation, and contributions to orthodontics as the major reasons for orthodontic faculty to continue teaching. A survey performed by DePaola revealed that financial firmness of the position, geographic desirability, tenure, better support from chairperson or dean, 25 percent higher salary, and better interdepartmental relationships were the primary reasons for established faculty to move from one institution to another. Again, once financial concerns are omitted, the work environment is a primary concern. Entering faculty may have goals of intrinsic rewards or altruism, but faculty leave because of financial concerns. The primary reason orthodontic faculty leave their full-time positions is salary, followed by control over work and financial support of department and program. The most common reason for oral and maxillofacial surgeons to leave academia was to increase their income. In Schenkein and Best’s survey, the factors found to have a negative impact on choosing a career in education were income level of dental faculty, pressure to generate income for the university, time required to prepare for an academic career, income differential compared to private practice, change by universities to an emphasis on non-tenured-track positions, and level of indebtedness. In McNally et al.’s article regarding endodontic residents’ attitudes about academic careers, the two major reasons for not entering academia were salary and educational debt.
The necessity for monetary compensation of faculty cannot be overlooked, especially with private practice being so lucrative. Over the last decade, full-time faculty salaries have risen 25-30 percent; however, their private practice counterparts’ income has risen 78 percent.3 Placing these percentages into dollars means comparing $168,000 of private practice income versus $67,550, $80,400, and $103,000 in base salary for the academic levels of assistant, associate, and full professors.3 These faculty earnings did not include any faculty practice consideration, administrative stipends, or other incentives. If all potential compensation for a full professor is taken into account, the average total compensation increases to $133,100, which is still 26 percent short of the private practice figure.3 While no fringe benefits are considered in these figures, the guaranteed portion of the faculties’ salaries reported between 1990-98 have only managed to keep pace with the increasing cost of living. The private practitioners’ percent increase in income has risen 2.5 times the percent increase in the cost of living.1

To further complicate matters, obtaining a promotion to a higher paying academic rank requires time and effort. The requirements to obtain an academic, tenure-track promotion are fluid from institution to institution and are difficult to clearly delineate; however, the age of faculty at various academic ranks has been documented. The average age of assistant, associate, and full professor is 48.3, 54.0, and 59.7 years for clinical science faculty.1 When we combine basic and clinical science faculty, the average age of assistant, associate, and full professor is 45.4, 53.7, and 59.0 years. These numbers do not provide positive recruiting material when trying to induce a colleague or future colleague to enter dental education. Even with an optimal working environment, asking potential faculty to exhibit patience regarding this delayed compensation for their talents is unrealistic.

The topic of compensation requires discussing the educational debt of dentists. McNally reported that seventy-six out of 289 endodontic residents reported a projected educational debt of $150,001 or greater and eighty-three of the 289 had projected debt between $87,701 and $150,000.6 To illustrate the sharply climbing cost of dental education, compare the average debt of a dental student graduating in 1998, which was approximately $84,000, to the average debt in 2001, which was $105,500.15 Myers and Zwemer estimated that a pre-tax annual income of $178,206 would be required to service a debt of $99,358.8 Debt of this magnitude virtually precludes an individual from choosing an academic career.

Federal programs exist for faculty to obtain loan repayment provided certain criteria are met. The Faculty Loan Repayment Program is administered through the Division of Disadvantaged Assistance, a division of the Bureau of Health Professions.16 The program was authorized by the Disadvantaged Minority Health Improvement Act of 1990.17 The criteria for the program stipulate that participating faculty must teach for a minimum of two years and receive a salary commensurate with their experience. In addition, the faculty’s institution provides some of the loan repayment money unless a waiver is granted, and preference is given to faculty from a disadvantaged background.16-18 The total amount, over the entire length of the program, received in loan repayment is a maximum of $20,000 or 20 percent of the faculty’s debt, whichever is less.16 As of 1997, twenty-one of the thirty-one individuals who have completed the Faculty Loan Repayment Program held full-time academic positions.16 When comparing the maximum repayment amount available through this program ($20,000) to the average indebtedness of dental graduates ($105,000), it is obviously not a definitive measure. More lucrative loan repayment options are found with the National Health Service Corps and Indian Health Service.17 Both of these programs are service-oriented with the purpose of supplying health care practitioners to underserved populations. While both programs effectively provide dentists and other health care practitioners to underserved communities, neither program has goals related to faculty recruitment.

Minority Groups in Dental Education

One could assume, given financial shortcomings and indebtedness, that minorities would be underrepresented in dental education. This assumption bears out in practical application whether examining ethnic or gender considerations. In 1990, underrepresented minorities (URMs) represented 6.9 percent of all full-time faculty positions, and the percentage increased only to 9.1 in 1998.19 In 1998, Caucasians held 80.6 percent of all full-time faculty positions, and the percentage increased only to 9.1 in 1998.19 In 1998, Caucasians held 80.6 percent of all full-time faculty positions in contrast to Hispanics, African-Americans, Asians, and Native Americans holding 3.2 percent, 4.6 percent, 7.0 percent, and 0.6 percent posi-
cent.19 Information gathered by Devore indicates that U.S. population and Hispanics who make up 9 percent. African-Americans who comprise 12 percent of the minority faculty members, providing mentoring to for two years, demonstrating an ability to recruit applicant has the appropriate degree, assuring the applicant for the Minority Faculty Fellowship include being a member of an underrepresented minority group, no prior faculty position in the last eighteen months, no other service obligation, U.S. citizen or national, and have no delinquent loan payments to the federal government. This program pays 50 percent of the faculty’s salary or $30,000 whichever is less.

Centers of Excellence in Minority Health Professions Education have a purpose of improving the nation’s ability to train minority students in health education. Funds from this program can be used for the improvement of student performance and recruitment; faculty recruitment, training, and retention; information services and curricula; and faculty and student research. Centers of Excellence currently exist only for African-Americans, Hispanics, and Native Americans. An institution can qualify for this program if it can prove enrollment of underrepresented minorities above the national average or be a historically African-American university or college.

The percentage of underrepresented minorities (URMs) enrolled as first-year dental students in 1999 is very similar to the percentage of minority faculty. URMs comprise 22 percent of the U.S. population, but represent only 10.5 percent of the dental student population. To increase minority faculty numbers would require extreme, disproportionate recruiting from minority students. It also means that achieving diversity in dental faculty will not occur rapidly with such a small pool of minority dentists and a small pool of URM dental students from which to draw future faculty. Minority faculty will need to participate aggressively in recruitment and retention efforts to identify potential faculty and also be willing to serve as mentors.

Gender diversity has yet to be achieved in dental education. Despite being 52 percent of the U.S. population, females comprised only 24 percent of dental school faculty in 1999. A promising trend is that females were a significant portion of dental school enrollment and accounted for 40.2 percent of the total predoctoral enrollment in 2002 as compared to 2 percent in 1970. Postdoctoral positions occupied by females constituted 33.4 percent of all postdoctoral positions in 2001-02. Another promising fact is that the number of female clinical science faculty has risen from 357 in 1970 to 1,350 in 1990. Given that the entrance of females into den-
tal education in large numbers is a relatively new phenomenon, female faculty are relatively young compared to their male counterparts. Figures from a 1990 survey revealed that 55 percent of female dental educators were under forty years of age and 28 percent were between forty and forty-nine years of age. Nesbitt et al. found in a May 2001 survey the average female faculty to be seven years younger than men and having been in academic dentistry four years less.

The 1990 Waldman survey revealed that 6 percent of female faculty held the rank of professor, 17 percent were associate professors, 37 percent were assistant professors, and 29 percent were instructors. In contrast, male dental educators were distributed through the ranks more evenly, with 22 percent being professors, 25 percent associate professors, 31 percent assistant professors, and 14 percent instructors. Nesbitt et al.’s survey from 2001 found a different distribution of female faculty throughout the academic ranks with 15.2 percent at full professor, 47.1 percent at associate professor, 33.9 percent at assistant professor, and 3.9 percent at instructor compared to 43.2 percent, 39.1 percent, 16.4 percent, and 1.2 percent for men in those respective ranks. This continued disparity may reflect the limited amount of time women have been in dental education in significant numbers. In a study by Solomon et al., the promotion rates of male and female dental educators were found to be essentially the same with no statistically significant differences when examining the percentages of assistant professors who were promoted to associate professor or associate professor who were promoted to professor. Disparity occurred when the study reviewed promotions of male and female dental educators to dean or departmental chair. Men were more likely to be appointed as departmental chairs or deans, which includes assistant or associate dean positions. The authors concede that age and degree status of the faculty reviewed may be confounding factors within this analysis.

Since this 1990 survey, advancements have been achieved by female educators. Between 1995 and 2002, eight of the sixty-five U.S. and Canadian dental schools have appointed female faculty as deans or interim deans. In the 2001-02 academic year, 74.5 percent of the U.S. dental schools had female assistant or associate deans compared to 28.5 percent in the 1991-92 academic year or only 5 percent in 1970. Female department chairs have increased from 44.0 percent in the 1994-95 academic year to 60.0 percent for the 2001-02 academic year.

ADEA has implemented several programs to assist in developing future female faculty leaders. ADEA’s Women’s Affairs Advisory Committee is a six-member group that answers directly to the ADEA Board of Directors on gender-related issues. Since 1992, many dental schools have appointed Women Liaison Officers with fifty-two schools participating in 2001-02. The intent of ADEA’s Women Liaison Officer program is to improve the professional environment of female faculty, staff, and students through improved communication, networking, and mentoring. ADEA, in collaboration with other dental organizations and financial assistance from Proctor & Gamble Inc., has initiated leadership conferences for female educators with the latest being in Göteborg, Sweden in June 2003. Pfizer Inc. and ADEA initiated in 1994 the Enid A. Neidle Scholars Program. This fellowship, named for Dr. Enid Neidle, ADEA President in 1985-86, allows one female faculty member per year to spend three months at the ADEA office working on gender-related issues. Other initiatives or programs by ADEA in part or wholly include the Women Administrators’ Breakfast at the ADEA Annual Deans’ Conference, Women’s Health Information Network, and various workshops and seminars at ADEA’s annual sessions.

As with ethnic minorities, females face limited influence and presence in decision-making positions within schools and the profession, which affects their ability to be role models for students and junior faculty. Interestingly enough, the leadership skills normally associated with women—such as being inclusive, connected, interdependent, collaborative, consensus building, empowering, sharing, intuitive, and power-sharing—which have been devalued in the past are now sought out by private companies and universities.

Faculty Development and Leadership Issues

Because of the problems with recruitment and retention of faculty, developing the existing faculty to lead the educational system during difficult times is a priority. It is essential to develop the faculty members’ leadership skills over the course of their career in order to fill leadership, research, and administrative roles vacated by retirement or departures for the private sector so that the school and profession can continue to move forward.
Faculty development began as sabbatical leaves meant to refurbish or refresh faculty members. However, faculty development evolved in the 1960s to a focus on teaching skill enhancement because of widespread criticism of undergraduate instruction. Three factors served as the catalysts for institutions to implement programs that addressed concerns about quality of teaching and faculty stagnation: voluminous student complaints about the quality of teaching, revitalization of an unchanging teaching staff, and an influx of funding from outside agencies. The main missions of faculty development in the 1970s were instructional improvement, faculty renewal, and organizational development, but in the late 1970s and early 1980s the emphasis changed to funded research. The two key ingredients for a successful development program are institutional commitment and leadership support.

Faculty development is an example of the human capital theory. The essence of human capital theory is that increased potential and performance that individuals may contribute to an organization are a result of certain expenditures to enhance knowledge and skills. This philosophy was restated in 1989 by the American Dental Education Association (then named the American Association of Dental Schools) when it defined faculty development as the continuous process in which opportunities are provided for professional growth of the individual within the academic environment. Strong faculty development programs, as framed by that philosophy, are characteristic of institutions that value their teaching workforce, and the need for faculty development is constant throughout faculty members’ academic life, given that their careers go through stages. The development stages of an academic career according to Baldwin are the novice, early career, mid-career, and late career. The needs in each stage do not necessarily overlap.

The molding of faculty into our future leaders requires labor-intensive mentoring from established faculty and opportunities from the parent institution for advancement and development. The term “mentor” comes from the works of Homer which are approximately 3,000 years old. In these stories, Odysseus left a trusted friend, Mentor, in charge of his household and his son’s education when he left for war with the Trojans. Realizing his son would require preparation to adequately lead the kingdom, Odysseus placed this responsibility in the hands of Mentor. An analogy to junior dental faculty and the future of dental education is obvious.

In dental education, the nature of a mentoring relationship ranges from formal arrangements to apprenticeships. The University of British Columbia’s mentoring system for untenured faculty, for example, is very formalized with each mentored faculty having a clinical and research mentor and with a semi-annual review of the mentor team by the junior faculty’s department head. This program reported by Lowe et al. is being used as an intrinsic factor to encourage and motivate junior faculty within the university. By formalizing a mentorship program for faculty, the University of British Columbia has created an air of collegial interest, and hopefully retention, for its junior faculty.

Desjardins defines academic mentoring as an extended, trusting, and confidential relationship between two individuals who have mutual personal growth and academic progress as common goals. The person receiving the mentoring, who is often referred to as the protégé, expects certain functions of a mentor. A protégé’s expectations typically include protection, coaching, sponsorship, role modeling, acceptance, and counseling. The mentor’s expectations of the protégé include devoting the necessary time and energy to complete objectives, a commitment to mutual goals, a willingness to learn from the mentor, and an expectation of the protégé to grow more independent. The ability of junior faculty to achieve success in grants, publications, leadership, academic rank, income, and career satisfaction is a direct product of good mentoring. An additional benefit of good mentoring is that those protégés are more likely to serve as mentors later in their careers. A unique approach to recruitment through a mentoring process is found at the UCLA School of Dentistry. In this program, several senior dental students are selected to participate in an elective titled “Hands-On Experience for Future Dental Educators.” The elective provides experience in preparing and delivering lectures to first-year dental students during orientation.

Tenure and promotion are the systems that a new or junior faculty must navigate to achieve success in academia or at the very least survive. Tenure’s original intent was to protect the educational and financial freedom of educators developing new and potentially unpopular ideas; however, labor laws on a federal and state level now give similar protection. Many institutions have strict policies regarding obtaining tenure within a specific time frame or not having one’s contract renewed. A survey by Mayhew and Stewart revealed that 81 percent of responding
schools utilized a strict up-or-out policy with seven years being the most common time frame. The ability to achieve tenure has become more rigorous according to two surveys on the subject. Mayhew and Stewart compared 1993 and 1995-96 surveys regarding number of publications that faculty needed for tenure and reported an increase in the number of publications required. In this survey, 22.7 percent of schools reported that they required fewer than six publications, 59.0 percent required six to fifteen publications, and 18.3 percent required sixteen or more publications. In 1995-96, 6.7 percent of schools required fewer than six publications, 60.0 percent required six to fifteen publications, and 33.3 percent required sixteen or more publications. Mayhew and Stewart also noted that there is an overt drop in the number of schools willing to accept minimal publications for tenure, with a concurrent increase in the number of schools requiring numerous publications to secure tenure status.

Alternative tracks that do not award tenure have been touted as the academic fix for faculty with clinical gifts to contribute who are not interested in or talented in traditional scholarly pursuits. However, these tracks do not appear to be a panacea. Reasons primarily cited by deans of dental schools for utilization of nontenure tracks were greater administrative flexibility, school’s mission is fulfilled better, tenure is more difficult to obtain now, and faculty are not academically prepared for a tenure track.

The background of new faculty with regard to scholarly skills, the level of mentoring of new faculty, the accurate communication of requirements and expectations to new faculty, and the environment for development of faculty are all potential hindrances to faculty obtaining tenure. In a review of promotion and tenure policies of family medicine departments in U.S. medical schools, quality of research and publication were the most important factors in promotion and tenure. Institutions perceived sheer volume of publications to be more important than did departmental or divisional heads. When comparing two academic tracks at the University of Michigan, the clinical-scholar track generated the same number of publications as the physician-scientist track. Despite the evidence of publication by both conventional and alternative tracks, educators in nontenure alternative tracks are perceived as second-class regardless of the extent of their scholarly work. Eighty-one percent of schools link awarding tenure to the promotion to associate professor, thereby making publications even more vital. Given that the average age of a clinically based associate professor in dental schools is 54.0 years and a clinically based assistant professor is 48.3 years, the prospect for tenure could be discouraging. At the other end of the age continuum, young faculty seeking promotion or tenure cannot overlook the research and publication expectations of their department or institution even at the cost of teaching.

With the labor-intensive nature of developing faculty, the impending retirement of many of our learned colleagues who have served as mentors, and the emergence of non-tenure-track faculty with reduced emphasis on scholarly activity, the quantity and quality of leadership for dental education will become a precious commodity in the very near future. In contrast to corporate executives, there are minimal opportunities for formal education in leadership and management for dental faculty. Most education in this area is acquired on the job. Leadership and management actions often overlap with indistinct boundaries. Leadership is described as coping with rapid change by guiding an organization through major challenges. Management is described as coping with complexity by bringing order and predictability to a situation. With the problems facing dental education, these qualities will become even more valuable and need overt encouragement in current faculty. The American Dental Education Association started the ADEA Leadership Institute to assist faculty in assuming leadership roles in dental and dental hygiene education. In 2000-01, the institute selected nineteen fellows to participate in a year-long program studying leadership theory, self-assessment and peer assessment, team-building, interpersonal communication, educational and public policy, financial management, vision development, strategic planning, theory of learning organizations, and systems thinking. Unfortunately, ADEA’s laudable efforts cannot facilitate the quantity of faculty that will need development in the near future. Efforts of this nature by other national organizations and the dental schools will be required to meet the need for molding our future leaders. However, the subjects covered by that institute do strike a chord when compared to attributes valued by dental school deans. For example, the attributes considered important in a survey of deans by Brundo and O’Brien included communication, vision, interpersonal skills, integrity, competence, confidence, patience, financial skill, and leadership. An interesting aspect of this survey is that these deans listed faculty recruitment and retention as their primary problems.
Conclusions

The data reported in this article alleviate any doubt that the future of the dental faculty as a whole is in a precarious situation. The disinterest in academia by current graduates and impending loss of a large portion of our most experienced educators and leaders make for a bleak outlook that is accentuated by a poor representation by minorities among our faculty. Programs designed to entice minority individuals into dental education have brought attention to this issue but lack the resources to sufficiently impact the problem. The programs available for current educators to develop leadership skills also suffer from a lack of resources to effect major change in this area. A collective effort by professional organizations and the dental education system will be required to address our shortcomings in a meaningful manner.

Identifying the basic solutions for this shortage is deceptively simple. First, recruit the best and brightest from colleges and universities into dentistry as a profession. Second, interest the best of the best in a career in dental education. Third, make a career in dental education financially feasible for graduating dentists with inordinate amounts of school loans. Finally, mentor these individuals to the best of our ability so that they can replace us when the time comes. The funding, leadership, and logistics needed to arrest this situation are enormous and are the price of our collective complacency. It will take time for momentum to be achieved by professional organizations and the educational system; therefore, the first wave of the corrective measures must be initiated on an individual basis.

Fortunately, collective individual acts can potentially begin the process of recruiting faculty. Again, there are deceptively simple solutions available to the faculty member. First, put forth a demeanor that indicates enjoyment with a career in academia. The soured, disgruntled faculty is not an excellent example of recruiting. Second, whenever possible, inform potential faculty of the positive aspects of teaching while being realistic about the environment. The collective dental faculty would probably be surprised by the responses one gets when students are asked why they think we teach. Third, assist new faculty in making a financially successful start in faculty practice through sage advice, direct referral of cases, or assisting their networking with other health care professionals to develop a referral base. Debt is a burden that can undermine the ability of an individual to do what they want to do versus what they have to do. We should direct new faculty to seek the wise counsel of an accountant or similar financial advisor. Fourth, if a new faculty member requests assistance in his or her development, we should respond with our knowledge and time. If you were mentored well, continue the tradition. If you did not receive quality mentoring or any mentoring, start a tradition now. Learn to mentor as your protégé learns to teach. Perfection is not a requirement of a mentor, but interest and access are. The consequences of continued inaction are obvious. Our responsibilities as educators extend beyond simply teaching to identifying and preparing the next generation of educators to be our replacements.

REFERENCES