Leadership Development for Dental Students: What Do Students Think?

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Abstract: Effective leaders are needed to move the dental profession forward, building on past accomplishments, meeting new challenges, and leading innovation and change. There is a lack of research findings regarding students’ perceptions of the importance of leadership abilities and/or their interest in developing leadership skills during their dental school experience. The purpose of this study was to explore dental students’ perceptions related to leadership development. A forty-seven-question, self-administered, paper and pencil survey was administered to all students enrolled in the D.M.D. program at one Midwestern dental school. The response rate was 83 percent (225/272). The majority of students agreed that it is important for dentists to have leadership skills and that leadership skills can be learned. Most reported that they expect to assume a leadership role in their dental practices (97 percent), to participate in volunteerism in dentistry (85 percent), and to participate in non-dentistry-related leadership roles in the community (72 percent). Over one-third (37 percent) anticipate participating in leadership roles in dental associations, 28 percent in academic dentistry, and 14 percent in military dentistry. Approximately two-thirds of respondents agreed (42 percent) or strongly agreed (24 percent) that they would be interested in participating in a leadership development program if one were offered at their school. Students reported interest in improving their confidence, assertiveness, ability to communicate effectively (including public speaking), ability to listen to others, organizational skills, and ability to influence others. The results of this study suggest that many dental students are interested in developing leadership skills. Insights from this study can inform the design of leadership development programs.

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Effective leaders are needed to move the dental profession forward, building on past accomplishments, meeting new challenges, and leading innovation and change. The literature reflects awareness of the importance of leadership in all aspects of dentistry, including clinical practice,1,2 dental education,3-5 organized dentistry,6,7 dental research,8 and dental public health.9 Interest in developing dentistry’s future leaders has increased in recent years, as evidenced by the growing number of leadership development programs created for dental professionals. For example, the American Dental Education Association’s Leadership Institute accepted its first group of fellows in 2000, drawing future academic dental and allied dental leaders from across the United States and Canada.10 The Institute for Diversity in Leadership of the American Dental Association (ADA) was first offered in 2003 to “enhance the leadership skills of dentists who belong to racial, ethnic and/or gender backgrounds that have been traditionally underrepresented in leadership roles.” Since 2005, the ADA/Kellogg Executive Management Program for dentists has been offered through the Kellogg School of Management at Northwestern University.12 At the state level, programs such as the Ohio Dental Association’s Leadership Institute, which began in 2002, are now offered.13 Such programs primarily focus on providing leadership development opportunities for individuals who are mid-career and have gravitated toward leadership or leadership-track roles.

Leadership development at earlier career stages, in particular for dental students during their predoctoral education, has received less attention, yet the dental school years may represent one of the best opportunities for early identification and purpose-
ful development of leadership talent, interest, and abilities. The American Student Dental Association (ASDA) offers a biannual leadership training program for a select group of students who are involved in ASDA at the regional or national level. The recent creation of formalized student leadership development programs at the school level, at the University of Southern California School of Dentistry and at the University of Michigan School of Dentistry, suggests growing interest in creating additional, local opportunities for development.

For those interested in creating leadership development programs for dental students, there is a lack of research findings regarding students’ perceptions of the importance of leadership abilities and/or their interest in developing leadership skills during dental school, yet this information may have important implications for program design. No prior surveys assessing students’ perceptions of leadership development were found in the dental literature, but a similar study of medical students’ perceptions of competencies important for physician leadership and the effectiveness of various leadership development activities has been reported. The purpose of the study reported here was to explore dental students’ perceptions related to leadership development. Specifically, the study was designed to determine students’ perceptions of the characteristics of effective leaders, their perceptions of the importance of leadership skills for dentists and whether such skills can be learned, their interest in participating in leadership development activities during dental school, and their perceptions regarding the effectiveness of various leadership development activities.

Methods

The study protocol was reviewed and approved as exempt by the Case Western Reserve University Institutional Review Board. During February 2007, a forty-seven-question, self-administered, paper and pencil survey was administered to seventy first-year, seventy-five second-year, seventy third-year, and seventy-fourth-year students enrolled in the D.M.D. program at the Case Western Reserve University School of Dental Medicine.

The survey questions were developed by one faculty member with training in leadership theory and two third-year dental students who were active in student leadership roles. The survey questions were reviewed by several experienced dental leaders to ensure content validity. The survey was formatted using Snap Survey Software and pilot-tested with a small convenience sample of eleven dental students. These eleven students were excluded from subsequent participation in the study and did not complete the survey during the general administration to all students in February 2007. To determine test-retest reliability, twelve students who were not involved in the pilot-testing and who completed the survey during the general administration to all students in February 2007 completed the survey a second time two weeks later.

The survey included forty-two closed-ended questions with categorical or rating-scale type responses (ranging from “strongly agree” to “strongly disagree” or “very effective” to “not effective”) and five open-ended questions. The closed-ended questions were designed to assess the following: students’ attitudes regarding the importance of leadership abilities for dentists and whether or not leadership skills can be learned (ten questions), students’ past and current leadership development activities (four), the types of leadership roles, if any, that each student expects to assume in the future (nine), students’ interest in participating in leadership development activities during dental school (three), students’ perceptions of the effectiveness of a variety of leadership development activities (twelve), and whether the student has a role model or mentor in dentistry (one). Demographic data (year of study, gender, and race/ethnicity) were also collected (three questions). The five open-ended questions asked students to describe the following: qualities or abilities of effective leaders, leadership skills the student would personally like to improve, past and current leadership development activities in which the student had participated, and the student’s age.

Time to complete the survey was provided near the end of a regularly scheduled class. Students were informed that participation was voluntary and that their responses would be confidential. Each survey was tracked with a number solely for the purpose of following up with nonresponders. One follow-up copy of the survey was distributed to nonresponders. Students were assured that their name would not be linked with their responses at any time and that only the researchers would have access to the data.

Data were analyzed using SPSS 14.0 statistical software. To determine the test-retest reliability of the survey questions, responses from the twelve students who completed the survey at the initial ad-
ministration and again two weeks later were analyzed. For each question with categorical responses, the percent agreement between the two sets of responses was calculated. For each question with rating-scale type responses, the Spearman rank order correlation coefficient was calculated. Questions with percent agreement below 70 percent or Spearman’s rank order correlation coefficient less than 0.5 (moderate correlation) were excluded from further analyses. Of the remaining twenty-eight questions, percent agreement ranged from 75 percent to 100 percent, and Spearman’s rho ranged from .5 to .9. Descriptive statistics were calculated. Themes in students’ written responses to the open-ended questions were identified by one researcher (KV).

Results

Of the 285 dental students enrolled in the D.M.D. program, 272 were eligible to participate in the study after exclusion of the two student researchers and the eleven students who participated in the survey pilot-test. Two hundred and twenty-five students completed the survey, yielding a response rate of 83 percent (225/272). Response rates by year of study were the following: year one (52/65, 80 percent); year two (66/74, 89 percent); year three (59/65, 91 percent); and year four (48/68, 71 percent). Seventy-three percent of respondents were male, and twenty-seven percent were female. Respondents ranged in age from twenty-one to fifty-three years (mean 26.9 ±3.6 years). Seventy-nine percent of respondents identified their race/ethnicity as Caucasian, 12 percent Asian, 1 percent African American, 1 percent Native Hawaiian/Pacific Islander, 1 percent Native American/Alaska Native, 1 percent Hispanic, and 5 percent Other.

Students’ attitudes related to leadership development were assessed. The questions and distribution of responses are shown in Table 1. Nearly all students agreed (36.4 percent) or strongly agreed (62.7 percent) that it is important for dentists to have leadership skills, and agreed (58.2 percent) or strongly agreed (37.8 percent) that they have the potential to become leaders in the future. The majority of students agreed (53.3 percent) or strongly agreed (42.7 percent) that leadership skills can be learned and, conversely, disagreed (52.9 percent) or strongly disagreed (34.2 percent) with the statement that leaders are born, not made.

Students were asked to indicate what type(s) of future leadership role(s) they could anticipate participating in, if any. Responses are shown in Figure 1. Nearly all (97 percent) students reported that they expected to assume a leadership role in their dental practices. The majority of students anticipated participating in volunteerism in dentistry (85 percent) and in non-dentistry-related leadership roles in the community (72 percent), such as coaching youth sports teams or volunteering in community groups or organizations. Over one-third (37 percent) anticipated participating in leadership roles in dental associations, 28 percent in academic dentistry, and 14 percent in leadership roles in military dentistry. Two students (1 percent) reported that they do not see themselves in any type of leadership role in the future.

To explore students’ perceptions about the characteristics of effective leaders, students were asked to provide a written response to this question: “Thinking of leaders whom you know and/or have observed, please list three qualities or abilities that you believe make those individuals effective leaders.” Students perceived that effective leaders have the following characteristics: ability to communicate effectively; ability to lead by example; confidence and/or charisma; ability to organize, formulate a plan, and follow through; good listening skills; commitment; dedication and belief in the importance of their work or cause; knowledgeable and credible; and ability to delegate tasks to others.

To gain insight into the types of leadership skills that students would like to develop, students

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<th>Table 1. Dental student attitudes related to leadership development (n=225), by percentage of total respondents</th>
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<td>Strongly Agree (%)</td>
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<tr>
<td>It is important for dentists to have leadership skills.</td>
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<td>I have the potential to become a leader in the future.</td>
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<td>Many leadership skills can be learned.</td>
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were asked to provide a written response to this question: “What three leadership skills would you personally like to improve, if any?” The leadership skills that students were interested in improving included the following: ability to communicate effectively (including public speaking ability); confidence; assertiveness; ability to be an effective listener; organizational skills; and ability to influence others.

Students were asked to indicate the extent to which they had participated in leadership roles and/or formal leadership training in the past. Students listed a variety of past leadership experiences related to student government and clubs, fraternities and sororities, prior work experiences, sports teams and/or coaching, and numerous volunteer and service activities. A total of over one-half agreed (25 percent) or strongly agreed (31 percent) that they had participated in formal leadership training in the past, 40 percent reported that they had not, and 4 percent reported that they did not know.

Respondents were asked to respond to this statement: “If a leadership development program were offered to dental students at Case, I would participate.” Responses are shown in Figure 2. A total of approximately two-thirds of respondents agreed (42 percent) or strongly agreed (24 percent) that they would be interested in participating in a leadership development program. Fourteen percent reported that they did not know, and 20 percent reported that they would not be interested in participating.

Respondents were asked to indicate how effective various types of activities would be in helping them to learn about leadership and to develop their leadership skills. The responses of the subset of students who agreed or strongly agreed that they would be interested in participating in a leadership development program (n=143) are shown in Figure 3. These students showed a preference for relatively active rather than passive learning activities. For example, “having actual opportunities to lead” was rated as very effective or effective by the highest percentage of students (89 percent), followed by “finding out how others perceive my leadership skills” (76 percent), while “listening to a talk given by a leadership expert” and “self-study” were rated as very effective or effective by 55 percent and 30 percent of students, respectively.

Finally, 59 percent of respondents reported that they have a mentor or role model in dentistry, and 41 percent reported that they do not.
Discussion

This study explored dental students’ perceptions related to leadership development. The majority of dental students agreed that it is important for dentists to have leadership skills and agreed that leadership skills can be learned. Students’ perceptions of the characteristics of effective leaders, although not a comprehensive listing, were consistent with current leadership theory.18,19 Nearly all dental students...
reported that they expect to participate in leadership roles in the future, both in their dental practices and in other capacities within and/or outside the profession. A relatively high proportion, about two-thirds, indicated that they would be interested in participating in a leadership development program if such a program were offered at their school.

This study was subject to several limitations. First, the survey was administered to students at a single U.S. dental school. The extent to which these results can be generalized to students at other dental schools is unknown. Additional studies are thus needed. Second, students’ responses to the survey questions may reflect some degree of social desirability bias—the inclination to present oneself in a manner that will be viewed favorably by others and therefore to answer questions in a socially desirable way. We took steps to minimize such bias by ensuring that participants knew that their names would not be linked to their responses and that all responses were confidential. Finally, the results primarily reflect students’ perceptions and their predictions about their future behaviors. It would be informative to conduct a similar survey of dentists to determine their actual level of participation and experiences in leadership roles.

The study findings have several implications for leadership development program design. First, the study results indicate that students appreciate the importance of leadership within the profession, and it is likely that leadership skills can be learned, and would be interested in participating in a school-based leadership development program. Although leadership development programs are often designed to serve a small, select group of participants, these findings strongly suggest that it would be more appropriate to create local programs that are open to as many students as possible. Such programs could facilitate the success of all dentists in the leadership roles they assume, at all levels both within and outside the profession. Second, although many students had prior leadership experience and training, others had little or none. Students come to dental school with a diversity of experience and training in leadership, and those designing a program must assess and build on the existing knowledge base and prior experiences of potential participants. Third, students were readily able to identify leadership skills they wished to develop. Programs should identify and address students’ immediate perceived learning needs, while also including topics that expand the ways in which students think about leadership. Fourth, although many students reported that they have role models and/or mentors in dentistry, many reported that they do not. Exposing students to leaders in dentistry who can serve as role models could be an important function of a leadership development program at the local level. In addition, programs can expose students to effective leaders from outside the profession, which can serve to broaden students’ understanding of the importance and practice of leadership. Finally, students indicated a preference for relatively active, experiential learning activities, rather than more passive learning activities such as lectures, and program activities should reflect this preference as much as possible.

We are currently designing a pilot leadership development program for dental students at Case Western Reserve University School of Dental Medicine, to be implemented in 2008 with support from the Ohio Dental Association Foundation. The program design will reflect several of the findings of this study. The program will be open to all interested students, for example, and will include active learning exercises and exposure to role models from within and outside the profession. Leadership skills that students expressed interest in improving will be addressed early in the program.

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**REFERENCES**