Predental Enrichment Activities of U.S. Colleges and Universities

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Abstract: The purpose of this study was to examine predental enrichment activities and their impact on the number of applicants from some of the nation’s top dental school feeder institutions (DSFI). The DSFI were identified by their total number of applicants to dental schools and the number of applicants per total student enrollment. A survey consisting of twenty-seven questions on possible predental enrichment activities was administered by phone or sent by email to eighty-eight DSFI, with forty-nine responding. In addition to identifying and characterizing the most common predental enrichment activities, the relationships among the number of applicants, predental activities, and total student enrollments per institution were evaluated. The total number of dental school applicants/institution was correlated with the total student enrollment/institution ($r=0.529$) and the number of predental activities/institution ($r=0.520$). No correlation was observed between the number of activities at an institution and dental school applicants per thousand enrolled. Sixteen of the DSFI reported ten or more enrichment activities, the most common being preprofessional health advising (96 percent), dentistry club (88 percent), and volunteer programs (73 percent). In general, larger institutions produced more applicants and provided more enrichment activities. However, there was no correlation between the number of dental school applicants per thousand students enrolled and the number of activities at an institution. Results indicate that there are specific predental enrichment activities common to some of the top dental school feeder institutions in the United States. A better understanding of successful feeder programs may assist nonfeeder schools in developing or strengthening an interest in dentistry as a career option.

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Results from a previous study indicated that the majority of applicants to U.S. dental schools were supplied by relatively few feeder institutions.¹ Feeder schools, as identified by 2002-03 Associated American Dental Schools Application Service (AADSAS) data, were defined as any institutions with five or more applicants to dental school. These colleges and universities were ranked by their total number of applicants and by their ratio of applicants to total undergraduate enrollment. The study considered factors such as school size, geographic location, religious affiliation, and admissions selectivity criteria of feeder institutions and their relative influence on the potential dental applicant pool. Also, it was noted that additional dynamics probably contributed to the success of feeder institutions at fostering an environment to promote an interest in the dental profession.

The purpose of our study was to identify the predental enrichment activities common to some of the nation’s top dental school feeder institutions (DSFI) and assess their impact on the number of dental school applicants. Major areas examined included student organizations, preprofessional health advising, volunteer or community outreach programs, financial incentives, and instructional opportunities. The hypothesis underlying this study was that a better understanding of enrichment activities at DSFI may assist other undergraduate institutions in developing strategies that promote an interest in dental careers and increase the number of qualified dental school applicants.

Methods

A survey was developed to assess predental enrichment activities at some of the top DSFI. The survey consisted of twenty-five yes/no and two open-ended questions that examined twenty different activities and support services. The questions were compiled through web-based research and discussions with preprofessional health advisors. The survey (Figure 1) was administered by phone or sent by email to college or university representatives from the top eighty-eight DSFI, which included schools ranked by their total number of dental school appli-
cants or their applicant to total enrollment ratios. A total of forty-nine schools (56 percent) responded (Table 1). Dental school applicant data of the DSFI was obtained from AADSAS for the 2002-03 admissions cycle; college and university enrollment data was obtained from Barron’s Profile of American Colleges (2000 edition). The data was analyzed using basic descriptive statistics; Pearson correlation coefficients were used in determining relationships among variables. Predental enrichment activities were ranked according to their frequencies as reported in the survey. The following relationships were compared: 1) a DSFI’s total number of dental school applicants and the num-

Directions: Please select “yes” or “no” in response to the following questions, including additional information when applicable.

Institutional Information
Name of Institution:
Name of Individual Completing the Survey:

The University in General
1. Does your institution offer pre-dentistry as a major?
2. Does your institution have a dental school? If no, is your institution closely associated with a particular dental school at another institution?
3. Does your institution offer the option of a combined B.S./D.M.D. or B.S./D.D.S. degree program? If yes, how many years does the program take to complete (8, 7, or 6 years)?
4. Does your institution offer scholarships specifically reserved for pre-dental students? If yes, do the scholarships cover: full tuition, half tuition, other (specify)?
5. Does your institution offer a DAT review or preparation course?
6. Does your institution offer undergraduate courses providing an overview or introduction to dentistry? If yes, are such courses for credit? What is the basic format of the course(s): lecture, lab, or combination?

Advising
7. Does your institution offer a specific pre-professional health advising program?
8. Is there a specific pre-dental advisor?
9. Is there a pre-health committee that provides pre-dental students with letters of recommendation?
10. Does the advising department offer workshops on writing personal statements for dental school applications?
11. Does the advising department conduct practice interview sessions with pre-dental students?

Student Involvement
12. Does your institution have a Predental Honors Society?
13. Does your institution have a chapter of ASDA (American Student Dental Association)?
14. Does your institution have a dentistry club or group of any sort? If yes, how many students are involved?
15. Are the predental group’s activities distinct from those of a pre-medical group?
16. Does the group advertise? If yes, through which of the following: posters, campus newspaper, campus TV channel, email, other (specify)?
17. Does the group do fundraising?
18. Does the group have a website? If yes, what is the address?
19. Is there any sort of yearly, monthly, etc. publication detailing activities of the dental group?
20. Does your institution have any clubs or organizations specific to minority or special interest group involvement in the field of dentistry? If yes, for which of the following groups: women, Hispanic, black, other (specify)?

Volunteer/Community Outreach
21. Are there volunteer programs offered through your institution that provide students access and experience in the field of dentistry? If yes, including which of the following: clinic, homeless shelter, hospital, local private dental practice(s), elementary/middle schools, other (specify)?
22. Does your institution offer any type of clinical observation program?
23. Does your institution have dental care facilities on campus?
24. Does your institution offer a shadowing program within the field of dentistry?
25. Does your institution participate in or organize oral health outreach experiences to elementary or middle school-aged children?

Other
26. On average, how many applicants to dental school does your institution have each year?
27. Please briefly describe any additional programs, activities, organizations, etc. your institution may have.
Results in Table 2 show that reporting DSFI had an average of forty-nine applicants to dental school (range 8 to 258) and an average student enrollment of 15,355 (range 1,143 to 36,861). The schools reported an average of eight predental enrichment activities per institution (range 2 to 15). Of these institutions, 33 percent reported ten or more activities.

As shown in Table 3, the enrichment activities most frequently identified by the DSFI were preprofessional health advising programs (96 percent of institutions), dental clubs (88 percent), and volunteer programs (73 percent). The frequencies of other predental enrichment initiatives were reported as follows: specific predental advising (69 percent), practice interview sessions (61 percent), shadowing programs (59 percent), personal statement workshops (53 percent), committees for letters of recommendation (49 percent), clinical observation programs (45 percent), oral health outreach to elementary/middle schools (39 percent), on-campus dental care facilities (37 percent), dentistry overview/introduction courses (31 percent), DAT review courses (27 percent), predental honors societies (20 percent), affiliated dental schools (20 percent), ASDA chapters (18 percent), special interest/minority dental groups (16 percent), scholarships for predental students (10 percent), combined degree programs (10 percent), and predentistry as a major (6 percent).

Of the forty-three DSFI identifying a dental club (Figure 2), 26 percent reported a combined premedical/predental organization, while 74 percent indicated that the group was specific to the field of dentistry. Dental club activities included advertising in the form of posters, email, and campus newspapers (76 percent), as well as fundraising (42 percent), website development (36 percent), and yearly or monthly publications (16 percent). A total of thirty-six of the forty-nine DSFI reported volunteer and community outreach programs. These volunteer programs were located in a variety of settings, including clinics (67 percent), elementary/middle schools (67 percent), hospitals (28 percent), local private dental practices (28 percent), and homeless shelters (25 percent) (Figure 3).

Pearson correlation coefficients were used to measure the linear relationships among the total number of predental enrich-
ment activities, total number of applicants to dental school, and total student enrollments. The total number of dental school applicants was significantly correlated with the number of predental activities per institution, with a positive r value of 0.529 (Figure 4). A strong correlation was also observed between the total number of dental school applicants and an institution’s total student enrollment (r=0.520) (Figure 5). However, there was no correlation between the number of activities at an institution and the number of dental school applicants per thousand enrolled (r=0.047) (Figure 6).

**Discussion**

It has been suggested that preprofessional health advising plays a key role in encouraging students to explore the idea of a dental career. Results from the current study support this observation, as nearly all of the responding DSFI had a preprofessional health advising program. Furthermore, many schools specified that the preprofessional health advising program at their institution included a dedicated predental advisor. According to a 2003 American Dental Education Association (ADEA) survey, only 31 percent of students graduating from dental schools had decided on a career in dentistry upon beginning their freshman year of college. This finding suggests that career and preprofessional health advisors can play an important role in directing undergraduate students toward a future career in dentistry.

It has been proposed that dental clubs may help to foster an interest in dentistry as a profession. Our results indicate that predental clubs are a common feature shared by many of the top DSFI. Dental clubs can provide students the opportunity to participate in educational, community, and social activities that will enhance their knowledge of the profession and assist them in becoming excellent dental school applicants. Predental groups offer a mechanism for organizing and participating in shadowing experiences, dental workshops, and volunteer outreach programs. For example, students may participate in offering oral hygiene instruction to young children at local day care centers, sponsoring blood drives and food share programs, and providing tutorial services. Societies may also offer courses and access to guest speakers, including admissions officers, specialists, and dental students. Through these opportunities, predental clubs allow students to actively demonstrate their commitment to dentistry as a career. As a recruitment initiative, dental schools

<table>
<thead>
<tr>
<th>Characteristic/Predental Activity</th>
<th># of Institutions (n=49)</th>
<th>% of Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preprofessional health advising program</td>
<td>47</td>
<td>96</td>
</tr>
<tr>
<td>Dentistry club</td>
<td>43</td>
<td>88</td>
</tr>
<tr>
<td>Dentistry volunteer opportunities</td>
<td>36</td>
<td>73</td>
</tr>
<tr>
<td>Predental advisor</td>
<td>34</td>
<td>69</td>
</tr>
<tr>
<td>Practice interview sessions</td>
<td>30</td>
<td>61</td>
</tr>
<tr>
<td>Shadowing program</td>
<td>29</td>
<td>59</td>
</tr>
<tr>
<td>Personal statement workshops</td>
<td>26</td>
<td>53</td>
</tr>
<tr>
<td>Letters of recommendation committee</td>
<td>24</td>
<td>49</td>
</tr>
<tr>
<td>Clinical observation program</td>
<td>22</td>
<td>45</td>
</tr>
<tr>
<td>Elementary/middle school oral health outreach</td>
<td>19</td>
<td>39</td>
</tr>
<tr>
<td>On-campus dental care facilities</td>
<td>18</td>
<td>37</td>
</tr>
<tr>
<td>Dentistry overview/intro. course(s)</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>DAT review course</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>Dental school</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Predental honors society</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>ASDA chapter</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Special interest/minority dentistry group</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Combined degree program</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Predental specific scholarships</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Predentistry as a major</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

*Institutions could identify more than one activity.
may wish to assist regional colleges and universities in establishing predental clubs on campus.

The dental profession is constantly challenged with maintaining an applicant pool that is academically qualified, culturally sensitive, and ethnically diverse. Typically, the dental profession has relied on strategies sponsored by the American Dental Association to increase awareness of careers in dentistry. Other initiatives have focused on the recruitment and retention of minority applicants through outreach programs. Unfortunately, most of these strategies are not self-sustaining, as they rely heavily on continuous funding and do not promote a permanent structural change within the system.

The current study suggests that assisting traditional four-year colleges and universities to develop enrichment and educational strategies can perhaps have a meaningful impact on the size and quality of the dental applicant pool. For example, dental schools or even private practitioners could identify key personnel at local and regional institutions and give them the opportunity to participate in workshops that focus on dental careers, dental school requirements, admissions, and education. Dental schools could also assist in the establishment of on-campus predental clubs to offer students academic, community, and social opportunities. Support for the clubs might include the identification of a faculty advisor and the recruitment of community dentists to provide mentoring experiences, as well as guidance in drafting a constitution, advertising and fundraising strategies, and website development. Such an approach would eventually establish viable recruitment programs that are self-sustaining and require minimal financial commitments.

Results from this study indicate that the total number of dental school applicants at a college or university is positively correlated with the total number of predental activities at the institution. The availability of preprofessional health advising and predental societies appears to be essential to the success of most DSFI. However, the addition of other enrichment and educational activities may serve to further enhance the dental applicant pool. For example, local dentists may be contacted to serve as advisors, as a source of shadowing experiences, and as presenters for educational or workshop programs.

![Figure 3. Volunteer and community outreach programs](image)

Figure 3. Volunteer and community outreach programs

*Institutions could identify more than one program.

![Figure 4. Relationship between total applicants and number of activities per institution](image)

Figure 4. Relationship between total applicants and number of activities per institution

r=0.520
Conclusion

The current study indicates that there are specific predental enrichment activities common to some of the top dental school feeder institutions in the United States, including pre-professional health advising, an on-campus dental society, and volunteer opportunities. These three activities most common to feeder institutions could serve as the foundation for establishing strong predental curricula at other U.S. colleges and universities. A better understanding of potential enrichment and educational initiatives may assist nonfeeder schools in developing an interest in dentistry as a career option within their student bodies and also serve to increase the overall size and quality of the dental applicant pool.

REFERENCES