



Do Post-Bac Programs Make a Difference for Dental Students' Professional Education?

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ABSTRACT

Background: Increasing numbers of dental students participate in post baccalaureate (post bac) programs before entering dental school. The objectives were to assess the educational experiences of students who participated in a post bac program and to compare their attitudes towards post bac programs with attitudes of students who had not participated in such a program.

Methods: Data were collected from 401 dental students at the University of Michigan.

Results: Overall, 31.1% had taken time off after graduating from college and before entering dental school. 31.2% had taken additional courses during this time; 48.1% had worked in a dental office and 67.6% had volunteered in dental settings. 9.7% had participated in a post bac program. 5.8% reported that their programs had consisted of classroom-based education, 2.8% that they had participated in clinical activities and 2.3% that they had engaged in research activities. A large number reported that having participated in their post-bac program had helped them in the dental school application process, in the admission process and with doing well in their dental school classes. When students with vs. without post bac experiences responded to questions concerning the benefits of these programs in general, post bac alumni agreed more strongly than non-alumni that the programs prepare students for the admission process, for the dental school class work, that they recommend the programs to others and that the programs give students an edge in dental school.

Lessons Learned: Dental students with post bac experiences perceive the value of these programs for preparing students for dental school application, admission and the dental schoolwork more positively than students without such experiences.

Next Steps: Informing applicants from underrepresented backgrounds about post-bac programs could support their efforts to gain admission to health profession schools.

INTRODUCTION

- Since the creation of pre-dental post bac programs across the United States in the late 1990s, students from disadvantaged and/or underrepresented minority groups (URMs) interested in pursuing a DDS/DMD degree have both applied to and questioned the level of preparedness such programs can provide (1).
- Previous studies utilized quantitative surveys to briefly investigate post bac graduates' GPAs, but quantitative and qualitative data describing long-term academic success and comfort in clinical settings are unavailable (2).
- Studies show that uneven academic preparation, less rigorous educational background, family influence on preparation, aspiration and success, unease in a new setting, and a lack of professional role models were barriers for these students. In URM groups, even procedural steps such as how to apply to school with an AADSAS application, or finding a dentist to shadow, prove more difficult (3, 4).
- With the help of supportive faculty members, DAT prep courses and introductory dental courses, post bac programs have succeeded at creating stronger portfolios for dental school applicants. However, indicators of success in dental schools such as grades, patient care evaluations, board exam scores and specialty program participation of these students following matriculation have not yet been studied (5).

AIMS

The objectives were to assess

1. the educational experiences of students who participated in a post bac program and
2. to compare their attitudes towards post bac programs with attitudes of students who had not participated in such a program.

METHODS

This study was determined to be exempt from Institutional Review Board (IRB) oversight by the Health Sciences and Behavioral Sciences IRB at the University of Michigan, Ann Arbor, MI.

Study design: This research is a cross-sectional study of dental students who attended vs. did not attend a post bac program before dental school.

Respondents: Data were collected with anonymous web-based surveys from 469 dental students. (See Table 1).

Procedure: The students answered the questions concerning their educational experiences and attitudes towards post bac programs online.



Postbac MEDPREP

Table 1: Background characteristics

Background characteristics	Frequencies N = 401	Percentages
Gender: - male - female - non-binary	173 224 2	43.4% 56.1% 0.5%
Ethnicity/race: - African American - European American - Middle Eastern / Chaldean - Asian American - Mixed Race - Hispanic / Latino	23 218 38 94 16 8	5.8% 54.9% 9.6% 23.7% 4.0% 2.0%
Age	Mean = 23.74	SD = 2.613 Range: 19-38
Educational characteristics	Frequencies	Percentages
Year in program: - D1 - D2 - D3 - D4	186 185 13 15	46.6% 46.4% 3.3% 3.8%

RESULTS

The **first objective** was to assess the educational experiences of students who participated in a post bac program. **Table 2** shows that overall, 31.1% had taken time off after graduating from college and before entering dental school. Forty students (9.7%) had participated in a post bac program. 5.8% reported that their programs had consisted of classroom-based education, 2.8% that they had participated in clinical activities and 2.3% that they had engaged in research activities. 38.8% reported that having participated in their post-bac program had helped them in the dental school application process. 36.9% in the admission process and 41.6% with doing well in their dental school classes.

Table 2: Activities before entering dental school

After graduating from college:	Yes	No
Did you take time off between before starting dental school?	45.1%	54.9%
Did you take additional courses?	26.9%	73.1%
Did you work in a dental office?	32.9%	67.1%
Did you volunteer in dental settings?	47.9%	52.1%
Did you attend a post baccalaureate program? Yes	9.2%	90.8%
I did not attend a PB program because I believe(d) I would be accepted to dental school without it.	39.4%	60.6%

The **second objective** was to compare their attitudes towards post bac programs with attitudes of students who had not participated in such a program. **Table 3** shows that post bac alumni agreed more strongly than non-alumni that the programs prepare students for the admission process, for the dental school class work that they recommend the programs to others and that the programs give students an edge in dental school.

Table 3: Comparisons of responses of students who did vs. did not attend a PB program

Attitudes towards post bac programs	Students		p
	Did attend PB N = 30 Mean	Did not attend PB N = 299 Mean	
Post bac programs prepare students for the application process.	3.93	3.30	<0.001
Post bac programs prepare students for the admissions process.	3.97	3.24	<0.001
Post bac programs prepare students for success with class work.	4.23	3.69	<0.001
I recommend post bac programs to students interested in pursuing dentistry.	3.82	2.91	<0.001
Post bac programs inspire students to give back to their own community.	3.27	2.95	0.027
The courses students take in post bac programs give them an edge in dental school courses.	4.00	3.25	<0.001
The clinical experiences in post bac programs give students an edge in preclinical courses.	3.23	3.12	0.236
The clinical experiences in post bac programs give students an edge in clinical settings.	3.40	3.08	0.048
Attending a post bac program takes too much time.	2.67	3.28	<0.001
Attending a post bac program is too expensive.	3.60	3.63	0.442

Legend:
1 Answers ranged from 1 = strongly disagree, to 5 = strongly agree.

DISCUSSION

- These data showed that of the 401 dental students surveyed, twenty-two students were post bac alumni who generally had positive sentiments toward their educational experience.
- It is also noteworthy that about half of the 401 students surveyed took time off between college and dental school, regardless of enrollment in a post bac program.
- Former post bac students generally attributed their success in both (1) matriculation into dental school and (2) doing well in dental school to their post bac program.
- When students with versus without post bac experiences responded to questions concerning the benefits of these programs, post bac alumni agreed more strongly than non-alumni that the programs prepare students for the admission process, for the dental school class work, that they recommend the programs to others and that the programs give students an edge in dental school.
- While this study was primarily a pilot study, more data will now be collected.

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CONCLUSIONS

- Dental students with post bac experiences perceive the value of these programs for preparing students for the dental school application and admission process and the dental schoolwork more positively than students without such experiences.
- With an added year to prepare for the DAT, take hard science courses and engage in hands-on dental experience, a PB student should be a strong candidate for success during dental school.
- The aim is to publish the results to inform future applicants about the effectiveness of PB programs and to indicate to admissions committees that an additional year to gain introductory dental experience may be essential to success.

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