

Characteristics of Students in International Dentist Training Programs versus Applicants who are not yet successful in matriculating.

Nalliah RP, Timothé P.

Dr. Romesh P. Nalliah (corresponding author)

Associate Dean for Patient Services

University of Michigan School of Dentistry

1011 N. University, Ann Arbor, MI, 48109

Ph: 734-615-8057

Email: romeshn@umich.edu

Dr. Peggy Timothé

Director, Dental Public Health Residency

Texas A & M College of Dentistry

ABSTRACT

Purpose/Objectives: For foreign-trained dentists who seek requalification in United States (US) dental schools, the acceptance rate is half that of applicants to traditional four-year DDS/DMD programs. Unsuccessful applicants also lack clarity on how to strengthen their re-application. This is a comparison of foreign trained dentists who successfully matriculated

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into University of Michigan's advanced standing program and prospective students who have yet to matriculate into any advanced standing program.

Methods: We collected data through a survey on the website of University of Michigan program for foreign trained dentists website—the Synergy Program is tuition-free and helps International Dental Program (IDP) applicants navigate the application process. Secondly, we surveyed those enrolled in University of Michigan's IDP. We compared various characteristics about these two groups. Thirdly, we convened focus groups among University of Michigan IDP and had unstructured discussions about barriers faced by internationally trained dentists in entering and IDP. University of Michigan Medical School Committee on Human Studies determined this research is “not regulated”.

Results: There were 2,400 unique visitors to the website. Among respondents, 1,490 were female (62.1%). A total of 10.1% reported spending over \$30,000 on strengthening their application. There were 38 individuals (out of a possible 60) in University of Michigan's IDP who responded to the survey and 28 were female (73.7%). A total of 31.6% reported spending more than \$30,000 on strengthening their application. We had focus groups with twelve IDP students. Regarding perceived differences that led to acceptance, all participants described having a greater familiarity with American culture.

Conclusions: We found that those from wealthier households, those who are willing to spend more on their application process, and those who obtained an additional US degree were more likely to be matriculants in IDPs.

INTRODUCTION

Foreign-trained dentists play an important role in the United States (US) dental education and service delivery systems. About 5.9% of US practicing dentists have dental degrees from schools outside of the US.¹ Additionally, every year about 4.8% of the student body at US dental schools are non-resident aliens.^{Error! Bookmark not defined.} When we consider US dental residencies, foreign-trained dentists are even more prevalent. Many dental specialty residency programs, in some years, have almost half their class filled with foreign-trained dentists.² Finally, about 13.1% of dental faculty are foreign trained^{Error! Bookmark not defined.} and are educating our future dentists and generating the science that guides our profession. Despite all of this, in our own experience, internationally educated dentists are frequently seen as deficient or inferior and, unfortunately, the term “*foreign-trained dentist*” has become pejorative. When we compare this to medicine, the picture is very different. About 25% of US physicians are foreign trained;³ there is evidence they provide care in unique and important ways¹, and data suggest they have lower mortality rates than physicians trained exclusively in the US.⁴

Foreign-trained dentists must complete an International Dentist Program (IDP) at an accredited US dental school in order to be able to practice in the US without restriction. In 2018-19, the traditional DDS/DMD programs had 11,298 unique applicants for 6,250 places (55.3% acceptance rate) and in 2017-18 there were 11,873 applicants for 6,184 places (52.1% acceptance rate).⁵ Comparatively as our Table 1 shows, in 2018-19, there were 2,401 unique applicants to IDPs in the US (American Dental Education Association [ADEA], unpublished data, April 2022) for 627 places⁶ (26.1% acceptance rate) and in 2017-18 there

¹ <https://www.americanimmigrationcouncil.org/research/foreign-trained-doctors-are-critical-serving-many-us-communities>

were 2,298 unique IDP applicants (ADEA, unpublished data, April 2022) for 600 places^{Error!}
Bookmark not defined. (26.1% acceptance rate). Clearly, the IDPs are twice as competitive as the
traditional DDS/DMD program and, in this competitive environment, many highly skilled and
capable individuals miss out on places each year.

There is limited information to guide an IDP applicant. However, there is almost no
information to guide someone who has failed one or more application cycles on how to
strengthen their application. Subsequently, failed applicants pursue many pathways for
information to enhance their application. Unfortunately, the advice given on social media and
in other forums are often anecdotal. The advice given is that acceptance to an IDP requires
only a strong curriculum vitae (CV) and good clinical skills as measured by the bench test
performance. This advice is deficient on two levels—not all schools require a bench test, and
it discounts the personal statement and interview, which are critical. With faulty advice,
students spend time and money on boosting their CV with continuing education courses,
extensive hours of shadowing and multiple bench test preparation programs.

Put simply, what an applicant needs to be successful is a strong CV and personal statement
to gain an interview. Then, they need a strong performance in the interview and an
acceptable performance on a bench test. It should be noted that many schools also have a
basic skills bench test as part of the assessment of IDP applicants. However, in a highly
competitive environment, some applications, strong CVs and compelling personal
statements still miss out on an interview. But what makes a paper application strong? It has
been our observation that US clinical experiences and other activities that show career
dedication or unique skills (like research and community service) are of value. Further,
personal statements that seamlessly bring together all the experiences of a CV into one
coherent story also support the application. Often, another US degree (for example, a

master's degree) enables IDP admissions committees to consider the foreign-trained dentists' performance in an American academic context, which may be advantageous. Once selected for an interview, applicants need to listen well and answer questions well during the interview.

However, without this knowledge or mentorship, many foreign-trained dentists pursue additional trainings in hope of enhancing their applications, often at considerable cost. For example, many US dental schools offer observership/externship programs to strengthen one's CV. These programs provide exposure to preclinical and some limited clinical experiences in the US. The programs vary from one week to twelve months and their costs vary from \$204 to \$80,000.⁷ There are 32 non-clinical, non-Commission on Dental Accreditation (CODA) accredited programs among US dental schools and fourteen of these programs specifically invite foreign-trained dentists to apply. Error! Bookmark not defined.

Interestingly, only two schools without an IDP housed one of these non-accredited programs.

The goal of this paper is to combine the extensive experience of the authors in working with foreign-trained dentists and data gained from this evaluation to build the understanding of the difference in characteristics of students in IDPs versus applicants who are not yet successful in matriculating. Additionally, we seek to raise awareness about the vulnerability of desperate foreign-trained dentists who are seeking acceptance into an IDP.

METHODS

We used data collected from the website of a university-based, tuition-free dental applicant improvement program, "Synergy Program" ([SP] <https://synergydentist.org>). Although

affiliated with one US dental school, the SP provides information to help foreign-trained dentists applying to any school with information on writing personal statements, assembling CVs and engaging in interviews. The SP also guides applicants about nuances of the application process, like when to apply and how to navigate the application process and enhance their respective application packages. The program's website has a survey for website visitors who identify themselves as "applicants to US IDP". This anonymous survey collects demographic information (gender, age group and marital status), prior dental education, current dental career, intentions for US training, cost and expenses, and resources used. The survey is mainly used to inform the SP curriculum—for example, once we understood that many applicants were seeking uncommon pathways to licensure, we added a presentation to describe those pathways in detail, what type of applicant is successful in those pathways, and the limitations of those pathways, and we brought in dentists who had gone through those pathways to licensure.

We decided to evaluate and publish the survey data collected between June 2018 (when the website first went live) to March 2021, and the University of Michigan Medical School Committee on Human Studies determined this research is "not regulated" (HUM00213179). Further, we electronically distributed the same survey to students who successfully enrolled in the University of Michigan School of Dentistry's IDP. We then used simple descriptive statistics to compare Michigan's IDP-enrolled foreign-trained dentists to foreign-trained dentists who had visited the SP website, self-identified as "applicants to US IDP", and completed our website survey.

We also invited the 38 respondents to the University of Michigan's IDP survey to participate in a focus group discussion. Mainly due to time constraints, only 12 were able to participate and we conducted three focus groups with 12 volunteers (two with two people, two with four

people each). Facilitators led unstructured conversation about barriers and opportunities they have encountered. Again, in a separate institutional review board application, the University of Michigan Medical School Committee on Human Studies determined this research is “not regulated” (UOM00213180).

RESULTS

Table 2 presents all survey results.

Survey from the SP website

There were 2,400 unique visitors to the website between June 1, 2018 and December 31, 2021. Among all respondents, 1,490 were female (62.1%). Among all respondents, 1,580 reported being 30 years or younger (65.8%), a total of 1,210 were married (50.4%) and 1,130 were single (47.1%).

Among visitors to the SP website, 12.7% reported one failed application cycle, 6.13% reported two failed cycles, and 3.30% reported three or more failed cycles. Also, 18.1% of website visitors reported having an additional degree from a US higher education institute.

Many (40.1%) reported they spent up to \$1,000 on preparing/strengthening their application. Additionally, 24.9% reported spending between \$1,001 and \$10,000, and 10.1% spent over \$30,000. Of these, 31.5% reported that their largest expense was exam fees, and 24.5% reported it was attending continuing education courses. For 7.00%, the largest expense was observerships.

Among visitors, 37.3% reported household incomes greater than \$30,000.

Survey of IDP matriculants.

There were 38 individuals (out of a possible 60) who responded to the survey and 28 were

female (73.7%). Only 31.9% were 30 years or younger; 79.0% were married, and 15.8% were single. Also, 31.6% reported having a US degree.

Among matriculants, 31.6% reported one failed cycle, 31.6% reported two failed cycles, and 5.26% reported three or more failed cycles before successfully entering the IDP.

Only 5.26% reported spending \$1,000 or less in their respective application process. There were 36.8% who reported spending between \$1,001 and \$10,000 and 31.6% reported spending more than \$30,000. Of these, 36.8% reported that their largest expense was exam fees, and 21.1% reported the largest expense was observerships.

Matriculants reported household income that varied greatly: 39.8% reported household incomes of \$10,000 per year or less, and 32.0% reported incomes between \$10,001 and \$50,000. The remaining 22.1% had household incomes greater than \$50,000.

Among IDP matriculants, 72.4% reported household incomes greater than \$30,000.

Focus Group Participants.

Twelve students participated in the focus groups. Ten of these individuals reported at least one failed application cycle, and six reported two or more failed cycles. When discussing what could have made the difference between failure and acceptance, all participants cited being more familiar with American culture. One respondent even felt his newfound ability to make small talk was what made the difference in his interview success at multiple schools. A few also related that having more US dental experience enabled them to speak more about their observations of the American dental profession. We asked focus group participants if they sought feedback from admissions dean or program directors regarding application weaknesses and strategies to improve future application. Unfortunately, only one of the twelve ever received feedback from any of the schools.

Four of the matriculants expressed that they perceived condescension from interviewers at multiple schools. In the interviews, all participants expressed that in the US, those who speak English with a different accent are perceived to be less intelligent.

Nine of the 12 focus group participants described a cascade of events that led them to feeling discouraged. First, they followed the ADEA Centralized Application for Advanced Placement for International Dentists (ADEA CAAPID) website and the dental school sites they were applying to. They described these resources as very informative; however, among other things, they did not know that applications were considered on a rolling basis and some schools may stop reviewing applicants as soon as they fill their IDP class and long before the official application deadline—both authors have served at organizations where this occurred.

Upon failing their first cycle, those in the focus groups said they became more desperate and began to scour the internet for resources and help. This led many to Facebook and YouTube offerings from organizations, individuals, and foreign-trained dentists who now have their US dental degrees. Many of these programs charge high fees and focus group participants also reported that some contained error and just bad advice. As their desperation grew, participants related seeking a magic formula, rather than presenting their authentic selves.

Interestingly, all participants reported once they were accepted into an IDP, perceptions of them as dentists flipped. Previously, they thought they were treated as inadequate, incapable or less intelligent because they were foreign-trained. However, the moment they were accepted into an IDP, they were the ones trusted with the complex cases and they were the ones asked for their opinions. They believed they were not valued until they were

accepted into an IDP. In fact, some of these students were in the same professional networks but not afforded that respect until they were accepted into the IDP.

DISCUSSION

In the 12th century, the word “exploit” came from Norman French to mean advantage or profit.⁸ However, in the 1800s, the use of this word evolved to mean selfish gain. “Exploit” was used in writings by French socialists and by the anti-slavery movement in the US. The term is now used to describe circumstances where one individual or party extracts benefit or gain of resources from another individual or party. We explored several ways that organizations and individuals extract benefit or gain of resources from foreign-trained dentists in the US.

There are no “official sources” of information for applicants to IDPs. ADEA provides some basic information on the ADEA CAAPID website and each school has some school-specific application information on their websites. However, there are no informational programs other than SP, and even that is driven by only one school. The application process remains confusing and mysterious for prospective applicants to IDPs. The goal of the SP is to level the playing field and give all foreign trained dentist an equal opportunity—not just those that are highly resourced. Some of the topics taught are an introduction to the US healthcare system, and an introduction to key issues in the US dental profession (e.g., the opioid crisis, access to care, mid-level providers). Additionally, SP students get one-on-one feedback on their personal statements and CVs and get the chance to have practice interviews.

Non-native English speakers are considered less intelligent.

The IDP students in our focus groups, unanimously, felt strongly that non-native English speakers are considered less intelligent. It is important to note that these students' ideas of biases are not new^{9,10,11} and a large body of science supports these concerns. Research has shown that individuals who speak English with a nonnative accent are considered less trustworthy, however, evidence has also shown that exposure to these accents reduces the bias.¹² Research suggests that biases against individuals who speak English with a nonnative accent negatively affect hiring decisions.¹³ Evidence also shows a glass ceiling for advancement for individuals who speak English with a non-native accent.¹⁴ We believe that applicants to IDPs with foreign accents and imperfect syntax will have a harder time overcoming the conscious and unconscious biases they face. Interestingly, we found that 89.5% of matriculants and only 41.2% of applicants were already living in the US.

Cycles of failure create vulnerability.

All focus group participants thought the cycles of failure prompted them to spend hundreds (and sometimes thousands) of dollars on support programs and resources that have emerged in the US market in response to the demand created by foreign-trained dentists seeking admission into IDPs. One may consider this relationship from two points of view: firstly, that this is the US capital system at work and these revenue generating opportunities are serving the seller and the buyer. Secondly, that this is exploitation of foreign trained dentists who are desperate to re-qualify in the US.

Not all “observerships” are beneficial.

Many US dental schools offer programs to strengthen an applicant's CV,⁷ but often at considerable cost. For foreign-trained dentists, these programs provide exposure to preclinical and some limited clinical experiences in the US. One could argue, however, that

comparable experience could be gained from working as a dental assistant at a private dental office for a wage. The real value of these observerships/internships are that, if the student uses their initiative, it could be a foot in the door to some rich and unique experiences. By being in a dental school, the student may be able to seek out research opportunities or opportunities to serve in community projects. However, we would argue that just completing an observership/internship alone has limited value in the application process.

Previous research has shown that most of these non-CODA accredited observership-type programs are housed in schools with IDPs. Error! Bookmark not defined. It is unfortunate that these schools with IDPs have responded to the volume of foreign-trained applicants by creating non-CODA accredited programs rather than creating additional IDP seats.

Additional education.

Many foreign-trained dentists complete US master's degrees with the primary goal of strengthening their application to IDPs. Our surveys showed that among applicants and matriculants, there was no difference in the proportion who gained additional degrees in their home country. However, there was a big difference when we considered additional degrees gained in the US—only 18.1% of applicants to IDPs, but 31.6% of matriculants, had gained an additional degree in the US. In our focus group discussions, those who had completed a master's degree described the value of that training and reflected on how this strengthened their application. However, some focus group participants reported taking a master's program to strengthen their IDP application. Some completed a master's degree in fields where they knew they could gain a high GPA because the topics were already familiar to them. Therefore, we must ask what is the true value to these individuals? Moreover, we

have not evaluated the impact of taking the seat in the master's program and denying someone else from learning.

Financial burden.

IDPs charge more per year than the traditional DDS/DMD programs charge per year.^{Error!}

Bookmark not defined. Additionally, our study of IDP applicants found that household income varied greatly: 39.8% had household incomes less than \$10,000 per year and 32.0% were between \$10,001 and \$50,000. It is important to note that, for households of one person, the US federal poverty level is \$13,590 (for two person households it's \$18,310 and for three person households it's \$23,030).¹⁵ It is possible that many of these foreign-trained dentists are actually living near or below the accepted poverty guideline in the US. The remaining 22.1% had household incomes greater than \$50,000.

Our study revealed that 72.4% of matriculants had household incomes greater than \$30,000 US, whereas only 37.3% of applicants enjoyed the same income levels. Similarly, we found that 31.6% of matriculants versus only 10.1% of applicants spent more than \$30,000 on their IDP application process. Therefore, matriculants, on average, had more household income and spent more money on their IDP application process.

We found that matriculants tended to have more failed application cycles than applicants (Table 2). A total of 29.3% of applicants had one or more failed cycles, whereas, 84.2% of matriculants had one or more failed cycles. Perhaps in a related finding, we observed that 68.4% of matriculants were aged 31 or older but only 34.2% of applicants in the same age group.

Other topics raised in focus groups.

We did not have sufficient data to explore a few other themes that emerged in the focus groups. Those themes are listed below:

- Foreign-trained dentists on different visas have different abilities to work and earn and build their CVs for application; however, we judge them all by the same standard.
- Foreign-trained dentists from cultures similar to the US may have an advantage in the application process (we found almost a tenth of applicants were from Brazil, China or the Philippines but none of matriculants were from these countries).
- Although we make an effort to understand the economic means of applicants to traditional DDS/DMD programs, we do not make the same efforts for foreign-trained dentists, even though there could be even greater variations than in the regular DDS/DMD programs.
- Foreign-trained dentists may continue to face barriers and be vulnerable when they graduate due to limiting visa status.

Limitations.

There are several important limitations to our studies. Firstly, in Table 2 we have attempted to compare applicants to IDPs with matriculants; however, these groups may not be comparable at all. The applicants were generally younger, more likely to be single than married, less likely to have children, and less likely to ever have applied to ADEA CAAPID, just to name a few differences. Moreover, applicants did not necessarily apply to the University of Michigan and may not necessarily be a reasonable comparison to matriculants into the IDP at University of Michigan School of Dentistry. In fact, the only criteria the

“applicants group” met was that they self-identified as “applicants to US IDPs”. This is an important limitation and we have highlighted this in the limitations section. Furthermore, the comparison group—those enrolled in an IDP—are from one school (University of Michigan) and this makes our study less generalizable. Additionally, our focus group consisted of only 12 individuals from one school and this is a threat to generalizability of the focus group findings. Finally, this is a quasi-experimental project and all data sources were not originally intended for research—the data and this paper are merely intended to draw attention to circumstances faced by foreign trained dentists in the US and initiate discussions about solutions.

One of the professional goals of the authors has been to build a clearer and more transparent path to IDP acceptance. There are limited places in US dental schools for foreign-trained dentists seeking to re-qualify in the US. Because competition for these limited slots is so intense and the process can be frustrating, many foreign-trained dentists in the US are underemployed and may spend years re-applying to IDP. Some drop out of dentistry altogether. In addition to one of the authors being a foreign-trained dentist, our knowledge about the issues faced by foreign-trained dentists is based on our research on issues relating to foreign trained dentists. Error! Bookmark not defined.,16,17,18

Conclusion

As educators, we know the importance of keeping high standards for all graduates. This quasi-experimental evaluation showed that current circumstances in the application process to IDPs favored certain applicants over others: It appeared that being in the US, being 31 or older, having failed more application cycles, having spent more than \$30,000 on the IDP

application process, and having attended an observership/externship at an accredited US dental school were all associated with being a matriculant rather than an applicant to an IDP.

Editor's Disclosure

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References

1. Vujicic M. Will we see more foreign-trained dentists in the United States? *J Am Dent Assoc.* 2017 Jul;148(7):538-540. doi: 10.1016/j.adaj.2017.05.012. PMID: 28651708.
2. Kellesarian SV. Foreign-Trained Dentists in the United States: Challenges and Opportunities. *Dent J (Basel).* 2018;6(3):26. Published 2018 Jul 1. doi:10.3390/dj6030026
3. Association of American Medical Colleges, "2018 Physician Specialty Data Report: Active Physicians Who Are International Medical Graduates (IMGs) by Specialty, 2017: Table 1.7," available at <https://www.aamc.org/data/workforce/reports/492568/1-7-chart.html>
4. Tsugawa Y, Jena AB, Orav EJ, Jha AK. Quality of care delivered by general internists in US hospitals who graduated from foreign versus US medical schools: observational study. *BMJ.* 2017 Feb 2;356:j273. doi: 10.1136/bmj.j273. PMID: 28153977; PMCID: PMC5415101.
5. American Dental Association. Health Policy Institute Resources (Table 2). Accessed 4/28/22 and available at <https://www.ada.org/resources/research/health-policy-institute/dental-education>
6. American Dental Association. Health Policy Institute infographic on "International students in US dental schools." Accessed 4/28/22 and available at <https://www.ada.org/>

/media/project/ada-organization/ada/ada-
org/files/resources/research/hpi/hpigraphic_1021_2.pdf?rev=151797742f474799a676c26b7
a04363d&hash=F5A060C74F0CA3F94F598D7568F9AEB2

7. Sharma A, Sharma P, Kadhium VS, Kaur H, Nalliah RP. Offerings for foreign-trained dentists pursuing unrestricted licensure in the United States. *J Ind Dent Assoc.* 2021 Mar. Vol 15(2).
8. Online etymology dictionary. Accessed 4/3/22 and available at <https://www.etymonline.com/word/exploit>
9. Ro C. The pervasive problem of linguistic racism. British Broadcasting Corporation (6/3/21). Accessed 4/3/22 and available at <https://www.bbc.com/worklife/article/20210528-the-pervasive-problem-of-linguistic-racism>
10. Bari SA. Is good English a measure of intelligence? *The Daily Star* (1/29/15) Accessed 4/4/22 and available at <https://www.thedailystar.net/is-good-english-a-measure-of-intelligence-61919>
11. Woolston C, Osório J. When English is not your mother tongue. *Nature.* 2019 Jun;570(7760):265-267. doi: 10.1038/d41586-019-01797-0. PMID: 31182832.
12. Boduch-Grabka K, Lev-Ari S. Exposing Individuals to Foreign Accent Increases their Trust in What Nonnative Speakers Say. *Cogn Sci.* 2021 Nov;45(11):e13064. doi: 10.1111/cogs.13064. PMID: 34779531.
13. Hansen K, Dovidio JF. Social dominance orientation, nonnative accents, and hiring recommendations. *Cultur Divers Ethnic Minor Psychol.* 2016 Oct;22(4):544-551. doi: 10.1037/cdp0000101. Epub 2016 Apr 28. PMID: 27124152.
14. Huang L, Frideger M, Pearce JL. Political skill: explaining the effects of nonnative accent on managerial hiring and entrepreneurial investment decisions. *J Appl Psychol.* 2013 Nov;98(6):1005-17. doi: 10.1037/a0034125. Epub 2013 Aug 12. PMID: 23937299.

15. Office of the Assistant Secretary for Planning and Evaluation. Health & Human Services Poverty Guidelines for 2022. Accessed 3/3/22 and available at <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>
16. Allareddy V, Elangovan S, Nalliah RP, Chickmagalur N, Allareddy V. Pathways for foreign-trained dentists to pursue careers in the United States. J Dent Educ. 2014 Nov;78(11):1489-96.
17. Nalliah RP, Ramaswamy V, Timothé P. Coaching that helps International Dentists successfully matriculate into Advanced Standing programs in the US. J Dent Educ. 2021 Jan 16. doi: 10.1002/jdd.12547
18. Sharma P, Kadhium VS, Patel D, Rengasamy Venugopalan S, Nalliah RP. A systematic review of US Board of Registration in Dentistry websites – what are the pathways to licensure for foreign trained dentists? Indian Dental Association Student Digest. Vol 24(9); Sept 2021. P15-18

TABLE 1: Applicants by year to international dentist programs in the United States

Year	Number of unique applicants	Number of places open for IDP	Acceptance rate
2017-2018	2,298	600	26.1
2018-2019	2,401	627	26.1
2019-2020	2,345	708	30.2
2020-2021	2,367	655	27.7
2021-2022	2,404	not available	not available

*Table information comes from combining ADEA internal data and ADA data on accepted applicants found at https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/hpigraphic_1021_2.pdf?rev=151797742f474799a676c26b7a04363d&hash=F5A060C74F0CA3F94F598D7568F9AEB2

TABLE 2: Comparison of applicants to Matriculants in international dentist programs (IDP) in the U.S.

Question	Visitors to website (N=2,400)	Current IDP students (N=38)
GENDER		
Female	62.1%	73.7%
Male	27.9%	26.3%
Prefer not to answer	0.0%	0.0%

AGE RANGE		
Age Range (20-25 years)	26.7%	0.0%
Age Range (26-30 years)	39.2%	31.9%
Age Range (31-35 years)	20.4%	36.8%
Age Range (36-40 years)	7.5%	21.1%
Age Range (41-45 years)	4.2%	5.3%
Age Range (46-50 years)	1.3%	5.3%
Age Range (50+ years)	0.8%	0.0%
MARITAL STATUS		
Married	50.6%	79.0%
De facto relationship	1.3%	5.3%
Single	47.3%	15.8%
Divorced	0.4%	0.0%
Widowed	0.4%	0.0%
Other	0.0%	0.0%
HOW MANY CHILDREN DO YOU HAVE?		
0	71.4%	57.9%
1	17.1%	21.1%
2	7.7%	10.5%
3	2.1%	10.5%
4	1.3%	0.0%
5 or more	0.4%	0.0%
WHAT IS YOUR HOUSEHOLD INCOME?		
\$0-\$1,000 US	15.2%	16.7%
\$1,001-\$10,000 US	24.7%	11.1%
\$10,001-\$20,000 US	14.7%	0.0%
\$20,001-\$30,000 US	8.2%	0.0%
\$30,001-\$50,000 US	9.1%	5.6%
\$50,001-\$75,000 US	6.1%	27.8%
\$75,001-\$100,000 US	10.8%	16.7%
\$100,001-\$150,000 US	7.4%	16.7%
\$150,001-\$200,000 US	3.0%	0.0%
\$200,001 US or more	0.9%	5.6%
WHAT IS YOUR NATIONALITY?		
India	61.9%	63.2%
Brazil	7.1%	0.0%
China	0.0%	0.0%
Phillipines	0.8%	0.0%
United States	4.6%	0.0%
Other	23.0%	36.8%
WHERE DO (DID) YOU RESIDE WHEN YOU LAST APPLIED?		

India	33.2%	5.3%
Brazil	5.5%	0.0%
China	0.4%	0.0%
Phillipines	0.0%	0.0%
United States	41.2%	89.5%
Other	19.3%	5.3%
WHERE DID YOU COMPLETE YOUR FIRST DENTAL DEGREE?		
India	64.0%	63.2%
Brazil	7.1%	0.0%
China	0.8%	0.0%
Phillipines	1.3%	0.0%
United States	0.0%	0.0%
Other	24.7%	31.6%
HAVE YOU COMPLETED OTHER DEGREES OUTSIDE THE U.S.?		
Dental Specialty	20.2%	19.1%
PhD	2.4%	4.8%
MBA	1.6%	0.0%
MPH	0.8%	0.0%
MHA	0.4%	4.8%
Med	0.8%	0.0%
Other	16.5%	14.3%
No degrees other than dental	57.3%	57.1%
HAVE YOU COMPLETED OTHER DEGREES WITHIN THE U.S.?		
Dental Specialty	1.9%	5.3%
PhD	0.5%	0.0%
MBA	0.0%	0.0%
MPH	8.8%	5.3%
MHA	1.4%	5.3%
Med	0.0%	0.0%
Other	5.6%	15.8%
No	81.9%	68.4%
ARE YOU WORKING IN THE U.S. DENTAL PROFESSION?		
Yes, I practice as an Endodontist	6.0%	
Yes, I practice as a Dental Public Health Specialist	4.3%	
Yes, I practice as an Oral Medicine practitioner	2.1%	
Yes, I practice as an Oral Pathologist	0.9%	
Yes, I practice as an Oral Maxillofacial Radiologist	0.4%	
Yes, I practice as an Oral Maxillofacial Surgeon	3.0%	
Yes, I practice as an Orthodontist	3.0%	
Yes, I practice as a Pediatric Dentist	1.7%	

Yes, I practice as a Periodontist	1.3%	
Yes, I practice as a Dental Therapist	2.1%	
Yes, I practice as a Hygienist	1.7%	
Yes, I work as a Dental Assistant	22.2%	
Yes, I work at the front desk of a dental office	0.9%	
Other	26.5%	
No	23.9%	
WHAT U.S. EXAMINATIONS HAVE YOU COMPLETED?		
National Board Licensing Exam (NBDE) Part 1	27.96%	24.64%
National Board Licensing Exam (NBDE) Part 2	20.36%	24.64%
Test of English as a Foreign Language (TOEFL)	32.52%	26.09%
Commission for Dental Competency Assessments (CDCA) exam	0.30%	4.35%
Council of Interstate Testing Agencies (CITA) exam	0.00%	0.00%
Central Regional Dental Testing Services, Inc. (CRDTS) exam	0.30%	0.00%
Southern Regional Testing Agency, Inc. (SRTA) exam	0.00%	0.00%
Western Regional Examining Board (WREB) exam	0.00%	0.00%
Graduate Record Examination (GRE)	6.08%	4.35%
Dental Admissions Test (DAT)	0.61%	1.45%
Advanced Dental Admissions Test (ADAT)	11.85%	14.49%
WHICH PATHWAY TO LICENSURE ARE YOU PURSUING?		
Licensure through entry into an ADA accredited Specialty training program	22.03%	20.0%
Licensure through entry into an ADA accredited international dentist program	60.79%	80.0%
Faculty Licensure by gaining a Faculty position	6.17%	0.0%
Limited License by gaining employment at a community health center in Massachusetts	4.85%	0.0%
Hygiene Licensure through taking the Hygiene Board Exams in Florida	0.88%	0.0%
Licensure through having my dental school's curriculum assessed by the Board of Registration in Dentistry in the state of Minnesota	2.20%	0.0%
Licensure through another pathway	0.88%	0.0%
Not seeking to work in the dental field in the United States	2.20%	0.0%

HOW MANY FAILED APPLICATION CYCLES HAVE YOU EXPERIENCED?		
Zero	69.81%	15.79%
I have had 1 unsuccessful cycle	12.74%	31.58%
I have had 2 unsuccessful cycles	6.13%	31.58%
I have had 3 unsuccessful cycles	1.89%	5.26%
I have had 4 unsuccessful cycles	0.47%	0.00%
I have had 5 unsuccessful cycles	0.94%	0.00%
I have had 6 or more unsuccessful cycles	0.00%	0.00%
Other	7.08%	15.79%
I FEEL I HAVE (HAD) STRONG SUPPORT TO GUIDE MY ENTRY INTO THE US DENTAL PROFESSION		
Strongly Agree	23.04%	10.53%
Agree	25.65%	31.58%
Neither agree nor disagree	25.65%	15.79%
Disagree	18.70%	26.32%
Strongly Disagree	6.96%	15.79%
HAVE YOU ATTENDED US CONTINUING EDUCATION COURSES?		
Yes	27.4%	68.4%
No	72.6%	31.6%
HAVE YOU ATTENDED OBSERVERSHIPS OR EXTERNSHIPS AT ADA ACCREDITED DENTAL SCHOOLS?		
Yes	10.0%	42.1%
No	90.0%	57.9%
ESTIMATE HOW MUCH YOU HAVE SPENT ON PREPARING/STRENGTHENING YOUR APPLICATION IN THE US?		
\$0-\$1,000	40.09%	5.26%
\$1,001-\$10,000	34.91%	36.84%
\$10,001-\$20,000	8.49%	15.79%
\$20,001-\$30,000	6.13%	10.53%
\$30,001-\$50,000	4.72%	26.32%
\$50,001-\$75,000	1.42%	0.00%
\$75,001-\$100,000	1.42%	0.00%
\$100,001-\$150,000	1.42%	5.26%
\$150,001-\$200,000	0.94%	0.00%
\$200,001 or more	0.47%	0.00%
WHAT HAS BEEN THE MAIN SOURCE OF THE EXPENSES INCURRED?		
Continuing Education Courses	24.50%	10.53%
Examination fees	31.50%	36.84%
Fees for Observer programs or Externships	7.00%	21.05%
Textbooks	7.50%	0.00%
Travel	12.50%	5.26%
Other	17.00%	26.32%
WHAT RESOURCES DO YOU FEEL HELPED YOU THE MOST?		

Information about the US healthcare system	3.18%	21.05%
Information about US dental schools	7.73%	10.53%
Help editing my CV and Personal Statement	8.18%	15.79%
Help passing my National Board Dental Examinations	13.64%	0.00%
A mentor at an ADA accredited dental school to advise	27.27%	10.53%
Information about the various pathways of entry into employment for Foreign Trained Dentists	28.64%	10.53%
Continuing Education courses	5.00%	10.53%
Practice at interviewing technique	4.55%	15.79%
Practice at interacting with patients	1.82%	5.26%

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