Mind the Gap: How First-Generation and International Students Navigate Prehealth Pathways

Insights from the HPSA/SDN Fall 2024 Applicant Experience Survey

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Article

The path to health professions is challenging for all students, but for immigrants and first-generation (first-gen) prehealth students, it can feel like navigating uncharted territory without a map. These students often enter higher education with limited exposure to academic culture and professional networks, creating invisible barriers to success that persist throughout their educational journey ([Posid 2021](), [Ruiz 2021]()). While universities have begun implementing targeted support systems, research shows that these challenges multiply exponentially when these students pursue competitive health professional programs (Joy 2018, [Havemann 2023]()). The HPSA/SDN Fall 2024 Applicant Experience Survey offers compelling new evidence that highlights these systemic disparities and suggests pathways toward more equitable outcomes.

The Health Professional Student Association's Fall 2024 Applicant Experience Survey examined how immigrant/F1-visa-holding (immigrant/F1), first-generation (first-gen) US, and other-generation (other-gen) US prehealth students prepared for the 2024-2025 application cycle. For premed applicants, we compared each cohort's standardized exams (MCAT) and situational judgment tests (Casper and PREview). We also examined how each group sought advice about the application process from prehealth advisors versus internet sources.

Survey Methodology

The data in this report were analyzed from the HPSA Fall 2024 Applicant Experience Survey. The survey was declared IRB-exempt (IRB00012821, IORG00100811; IRB Protocol 12424601). Anonymous, volunteered responses were captured from an open call to 2024-2025 prehealth applicants between October and December 2024 using RedCap.

Key Findings on Test Performance (MCAT, Casper, and PREview)

112 respondents self-disclosed their performance on the MCAT, Casper, and PREview exams as part of their application profile. Figure 1 compares immigrant/F1, first-gen, and other-generational respondents. 18 immigrant/F1 respondents reported lower overall performance on the MCAT as shown by the interquartile range (506 to 515.5) and median (507). First-gen respondents' performance was better (IQR 507 to 518.5, median 512), but was lower than other-gen respondents (IQR 509 to 519, median 514).

Smaller performance differences were observed with the CARS section scores (Figure 2). Immigrant/F1 respondents had lower performance (IQR 124 to 129, median 126) compared to first-gen (IQR 127 to 129.75, median 128.5) or other-gen (IQR 126 to 130, median 128).

Smaller numbers of respondents took situational judgment tests. Among those taking the AAMC PREview exam, immigrant/F1 respondents reported lower scores (IQR 4 to 6.5, median 5.5) compared to first-gen (IQR 4.75 to 7, median 6.5) or other-gen respondents (IQR 6 to 7.25, median 7).

In contrast, other-gen respondents reported better performances on the Casper assessment; 38 of 56 had third- or fourth-quartile (highest) results. 4 of 10 first-gen and 4 of 10 immigrant/F1 respondents reported third- or fourth-quartile results. 5 of 10 immigrant/F1 respondents had first-quartile (lowest) performances.

While our results must be cautiously viewed through the lens of our small sample, they affirm that immigrant/F1 and first-gen applicants tend to have lower exam performance. Immigrant/F1 Casper and PREview performance may be due to English comprehension challenges (CARS scores) or less awareness of expected social norms about academic culture (tested with AAMC PREview) or American society (tested with Casper). If these results represent their cohorts in larger applicant pool, the immigrant/F1 and first-gen applicants may be less successful without broader, holistic consideration of their lived experiences that are of value towards a more skilled and socially responsive healthcare workforce.

Support for International and First-Generation Students

We have previously highlighted [F1doctors](#), a non-profit organization helping international health professions students navigate the US admissions process. [FGLIMed](#) is a national non-profit organization helping first-generation low-income prehealth students.

Insights on Advising Resources and Satisfaction

Our survey also suggests how immigrant/F1 and first-gen respondents sought information and resources about the application process. Roughly half of all applicants used undergraduate prehealth advising offices (18/31 (58.1%) immigrant/F1, 12/30 (40.0%) first-gen, 67/123 (54.5%) other, Figure 5). Using a 7-point Likert scale, immigrant/F1 respondents were slightly more satisfied with prehealth advisors than first-gen and other-gen respondents, as shown by both the median and interquartile range (Figure 6).

However, respondents relied more on internet resources, as affirmed by 24/31 (77.4%) immigrant/F1, 20/30 (66.7%) first-gen, and 106/124 (85.5%) other-gen respondents (Figure 5). Their satisfaction scores were higher than those given for undergraduate prehealth advising, and immigrant/F1 respondents were more satisfied than US advisees (Figure 7).

Few hired independent, for-profit consultants for application support: 2/30 (6.7%) immigrant/F1, 2/30 (6.7%) first-gen, and 17/125 (13.6%) other-gen. Finally, a small number had access to postbac advisors: 5/31 (16.1%) immigrant/F1, 4/30 (13.3%) first-gen, and 9/124 (7.3%) other-gen.

Action Steps

Immigrant and First-Generation Prehealth Students

Immigrant/F1 and first-gen students should seek communities where they can not only find safe spaces to connect with similar students but also reach out to available university resources. Early connections with advisors, professors, and other champions will help prehealth students understand the experiential steps needed to build a strong applicant profile. Access to these opportunities may be limited for immigrant/F1 students, but university resources can connect them to research, clinical, and community volunteer opportunities. Additionally, first-gen and low-income students may also leverage these resources to find convenient jobs or opportunities. The FirstGen Society offers leadership opportunities and a national network for college and professional students through formation of chapters and partners. Undocumented students should also be familiar with the Pre-Health Dreamers society.

Advisors and Administrators

Faculty, advisors, and student services should welcome immigrant and first-gen students to low-stakes professional opportunities, such as meet-and-greets, "happy hours," and celebrations of institutional research or community impact. Those interested in scholarship on the first-generation college experience should engage with the FirstGen Forward network.

The results from this survey affirm that, compared to other-gen applicants, immigrant/F1 and first-gen prehealth applicants risk having lower performance on critical admissions tests such as the MCAT and lower representation among matriculating health professions students (Mason 2022). Situational judgment test results suggest they may need more guidance navigating social norms and expectations in US academic settings. While many lean on institutional resources such as prehealth offices, many first-gen respondents remain relatively dissatisfied. Although some prehealth offices have organized special workshops for prehealth first-gen applicants (for example, Florida Atlantic University), more work must focus on improving prehealth advising services for first-gen and immigrant/F1 applicants' preparation and desirability as future academic health professionals.

Respondent Demographics

186 responses were analyzed for this report. Specifically, we compare 31 self-identified as immigrant/F1 applicants who are not United States permanent residents with 155 US citizens or permanent residents; 30 of the 155 self-identified as first-generation students/alumni (first-gen). The remainder is referred to as other-generational (other-gen).

Most respondents were pursuing a degree in medicine (23 immigrant/F1, 23 first-gen, and 92 other-gen), but we had responses from those interested in dentistry, veterinary medicine, or other health professions. Majorities were observed for female respondents and those taking gap years or not currently in school.

16 of 29 first-gen respondents said they grew up in a medically underserved/health professional shortage area. In contrast, 11 of 25 immigrant//F1 and other-gen US (44 of 125) applicants said they grew up in a medically underserved area. 21 of 29 first-gen respondents also self-identified as financially independent of their parents; 13 of 30 immigrant/F1 and 51 of 124 other-gen US applicants self-identified as financially independent.

Immigrant/F1 respondents self-identified as Asian (14), White (6), Black (5), and Middle Eastern (3). First-gen respondents identified as White (14), Asian (10), and Latinx/Hispanic (6). Other-gen respondents identified as White (90), Asian (21), Latinx/Hispanic (13), Black (6), Middle Eastern (5), and Native American/Indian (4).

Among their faith identities, immigrant/F1 respondents identified as Muslim (6), Agnostic (5), Atheist (4), and Christian (3 mainline Protestant, 3 Roman Catholic, and 3 non-denominational). First-gen respondents identified as Agnostic (7), Non-denominational Christian (6), Hindu (4), and Atheist (3). Other-gen respondents identified as Atheist (27), Roman Catholic (25), Agnostic (25), and Non-denominational Christian (20).

Most immigrant/F1 respondents began their education after arriving in the United States before high school (14) or during high school (7), and they consider their mastery of English as native as a health professional program applicant (26).

Tables

Demographics of survey respondents

Self-identification as a first-generation student (college or professional school)

First generation	immigrant/F1 (31)	First gen US (30)	Other gen US (125)
College	19	30	0
Professional School	22	27	55

Professional interest of respondents

Intended career goal	immigrant/F1	First gen US	Other gen US
Medicine	23	23	92
Dentistry	5	2	9
Veterinary	1	4	20
Other	2	1	4

Gender identity

Gender	immigrant/F1	First gen US	Other gen US
Female	15	21	77
Male	14	9	46
Gender non-conforming	1	0	1

Current student

Current student	immigrant/F1	First gen US	Other gen US
Yes	14	13	52
No	17	16	71
No response	0	1	0

Enrollment of current students

Attending school	immigrant/F1	First gen US	Other gen US
HS	0	0	0
CC	1	0	1
Public uni	5	5	22
Private uni	2	1	11
Non-degree	1	1	1
Masters	2	2	8
Doctorate	3	3	7
Other	0	1	1

Began education in United States (immigrant/F1 only)

Attending school	immigrant/F1
Before HS	14
HS	7
CC	1
Public uni	4
Private uni	2
Masters	1
Doctorate	1
Other	1

Gap years taken

Gap years	immigrant/F1	First gen US	Other gen US
Less than 1 year	7	7	42
1 gap	6	3	26
2 gap	12	9	25
3 or more gap	6	11	31

Financially independent of parents

Financially independent	immigrant/F1	First gen US	Other gen US
Yes	13	21	51
No	17	8	73

Financial assistance / Fee Assistance Program participation

Financial/FAP	immigrant/F1	First gen US	Other gen US
Yes current year	9	14	11
Yes, previous years	2	2	0
No rejected	3	4	4
Considering	2	1	3
Never applied	16	11	100

Grew up in medically underserved/health professional shortage areas

Grow up in MUA/HPSA	immigrant/F1	First gen US	Other gen US
Yes	11	16	44
No	14	13	81

Race and ethnicity self-identification

Race Ethnicity	immigrant/F1	First gen US	Other gen US
American Indian	0	1	4
Asian	14	10	21
Black	5	1	6
Hispanic	1	6	13
Middle Eastern	3	0	5
Native Hawaii	1	1	0
White	6	14	90

Faith community self-identification

| Religion/Faith	immigrant/F1	First gen US	Other gen US
Protestant	3	0	13
Roman Catholic	3	3	25
Non-den Christian	3	6	20
Jewish	1	0	3
Muslim	6	1	6
Buddhist	2	2	1
Hindo	2	4	1
Atheist	4	4	27
Agnostic	5	7	25
Other	4	3	3

Other self-descriptions

Descriptors	immigrant/F1	First gen US	Other gen US
Econ disadv	12	16	21
Edu disadv	7	12	6
Military veteran	0	1	4
Family military	1	5	15
Immigrant	19	4	3
Homeless exp	2	3	2
LGBTQ+	7	6	23
Medical disabled	1	1	13
Incarc exp	0	0	0
Non-stereotypical two-parent household	6	3	16
Student athlete	3	2	16

Figures

Premed Metrics

Figure 1.
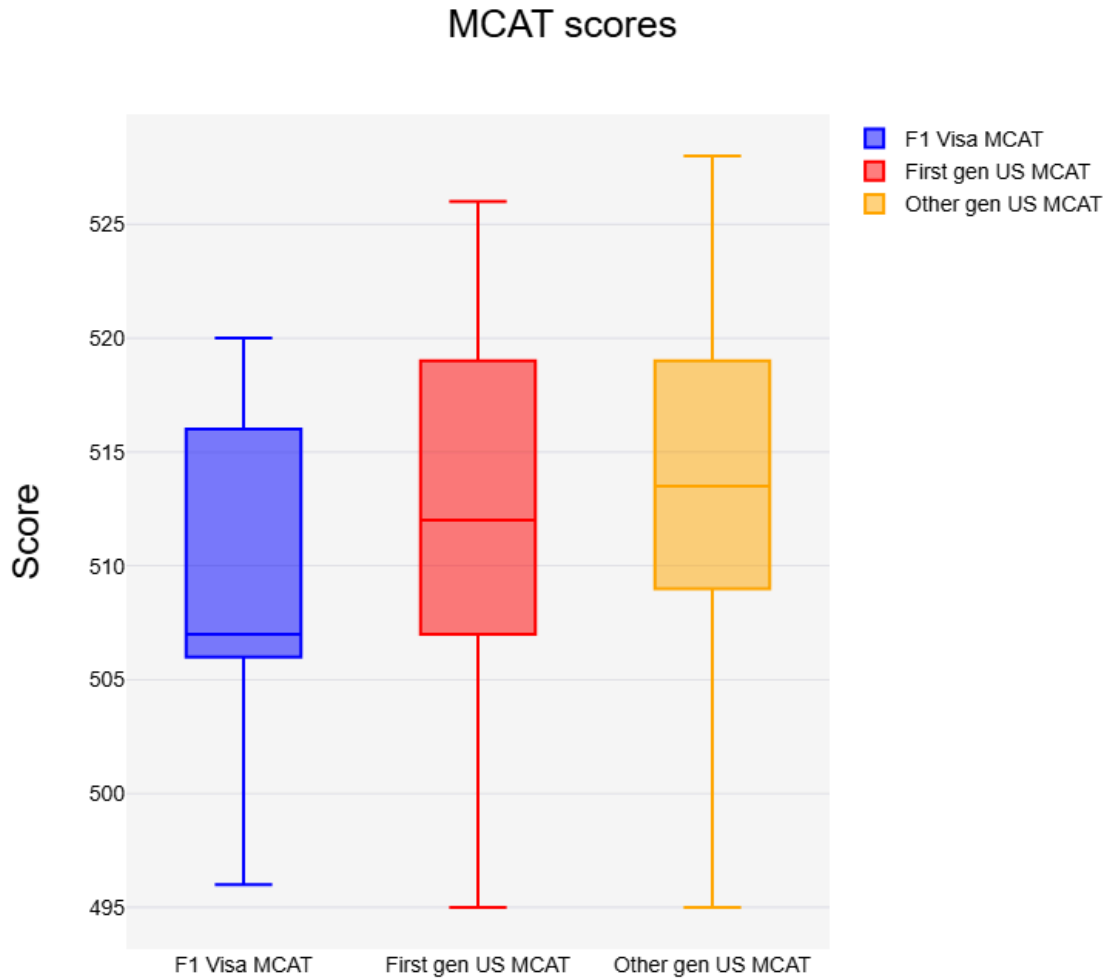
Self-reported MCAT scores. These boxplots show respondents' MCAT scores. The boxes represent interquartile range, and the median is highlighted. Analysis was performed from 18 immigrant/F1, 18 first-generation US, and 68 other-gen US respondents. Immigrant/F1 prehealth respondents reported lower MCAT scores and a lower median. First-generation US respondents performed comparably to other-gen US respondents, though their median was lower.
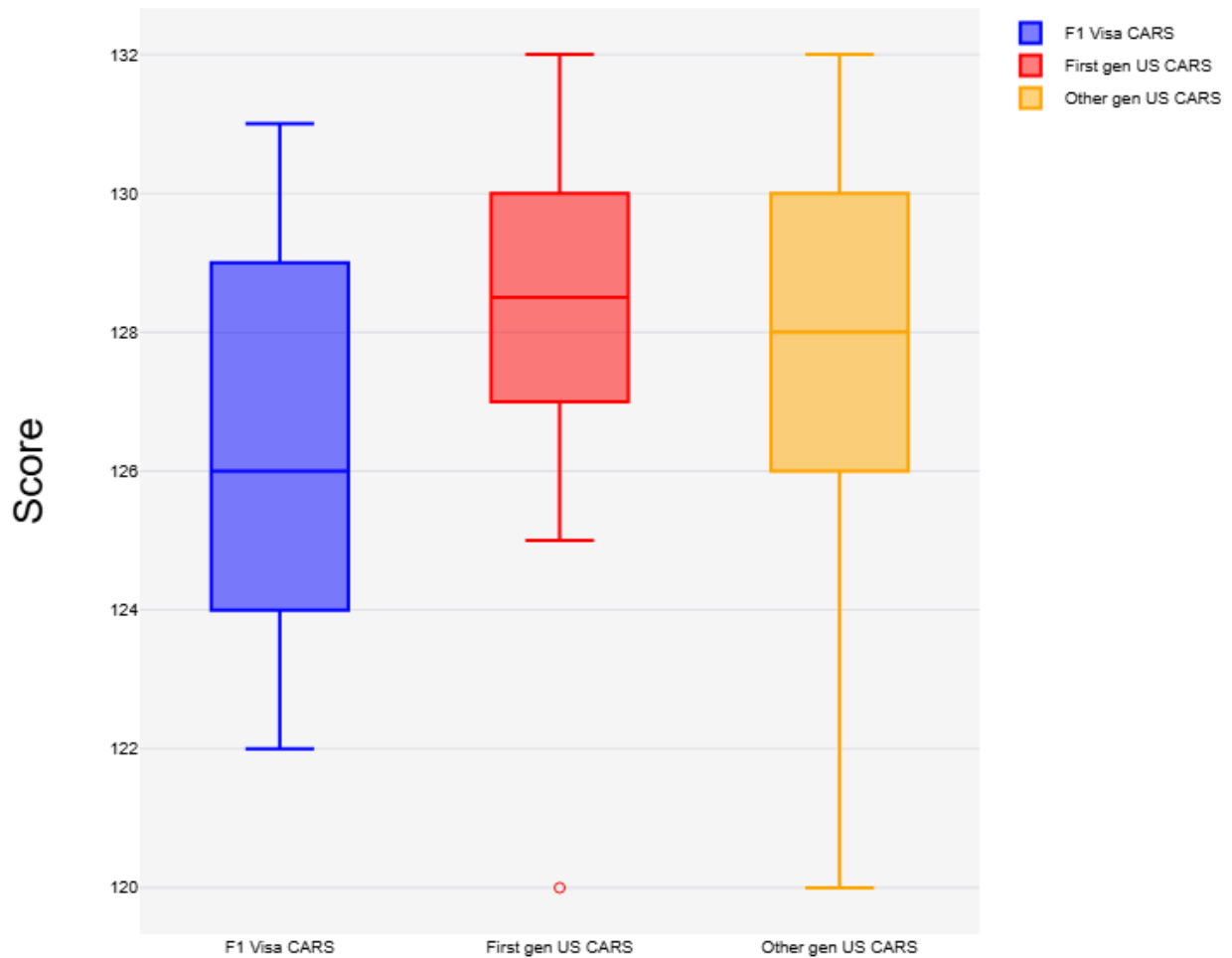
Figure 2. Self-reported MCAT CARS scores. These boxplots show respondents' MCAT CARS scores. The boxes represent interquartile range, and the median is highlighted. Analysis was performed from 18 immigrant/F1, 18 first-generation US, and 74 other-gen US respondents. Immigrant/F1 prehealth respondents had a trend of lower CARS scores compared to US respondents, including a lower median.
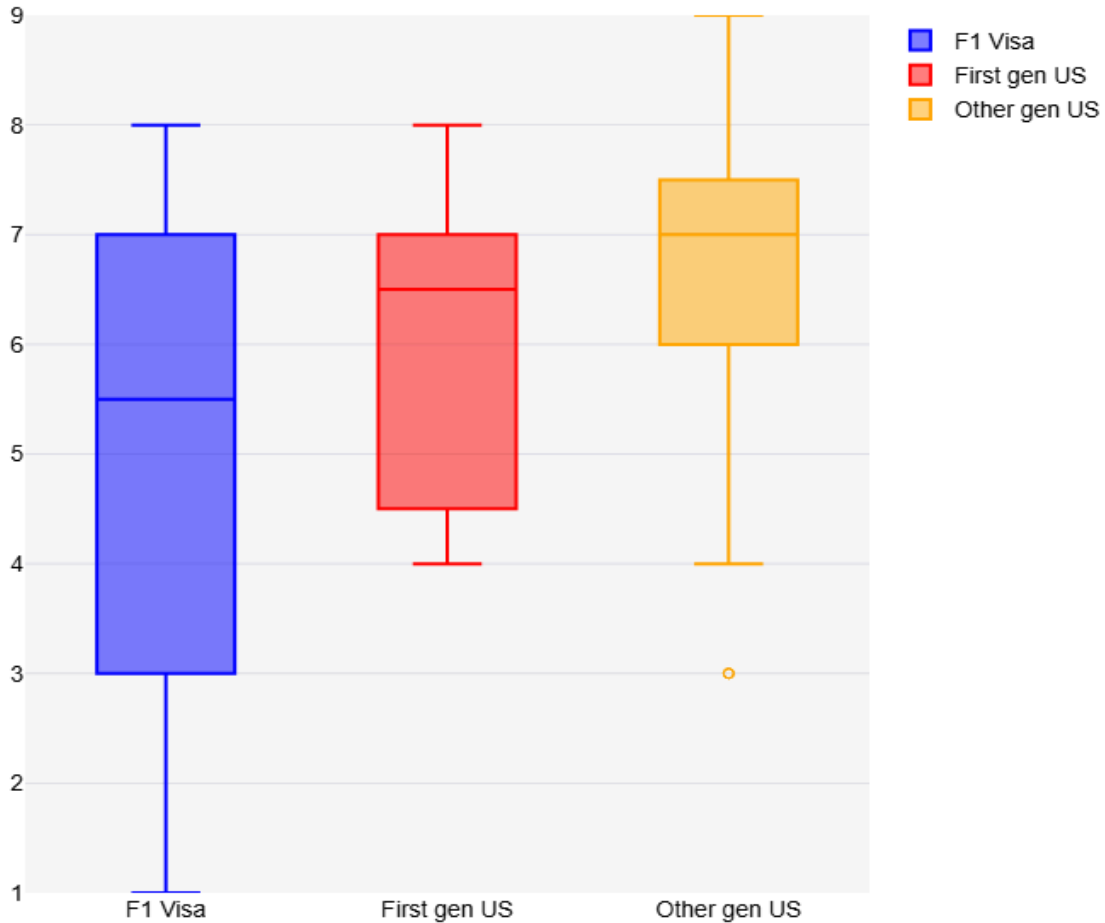
PREview scores

Figure 3. Self-reported PREview scores. These boxplots show respondents' PREview scores. The boxes represent interquartile range, and the median is highlighted. Analysis was performed from 4 immigrant/F1, 8 first-generation US, and 32 other-gen US respondents. Immigrant/F1 prehealth respondents reported lower scores, though the sample size was small. First-generation US respondents also generally reported lower scores than other-gen US respondents.
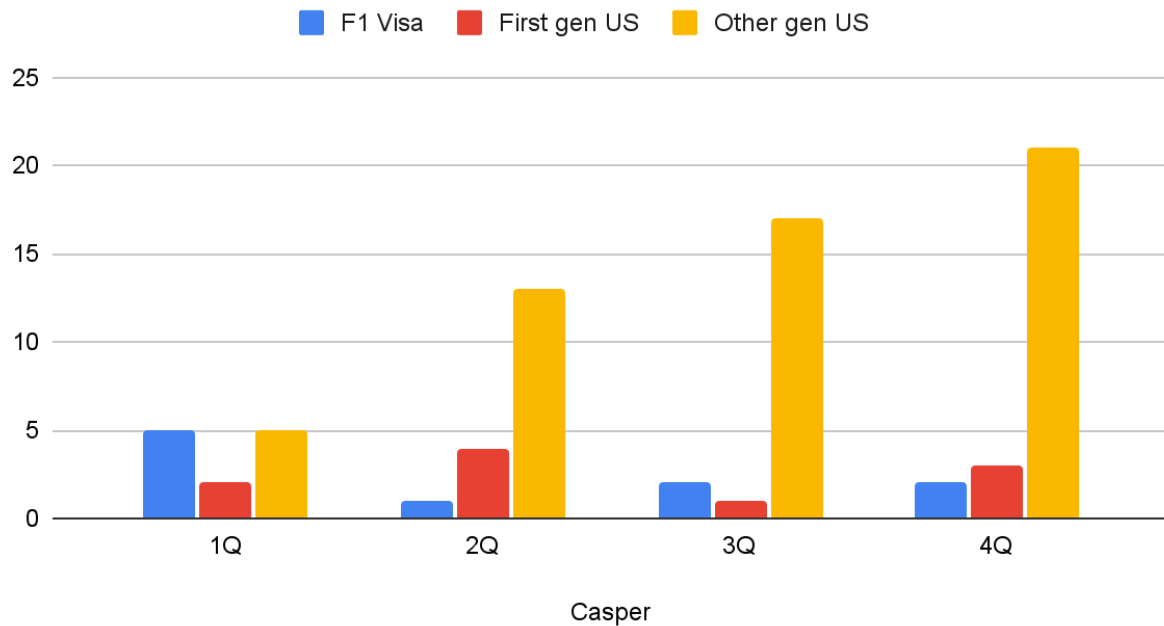
Figure 4 (shown as Figure 2 in online publication of article). Self-reported Casper results. These boxplots show respondents' Casper quartile results. Analysis was performed from 10 immigrant/F1, 10 first-generation US, and 56 other-gen US respondents. Immigrant/F1 prehealth respondents disclosed receiving more first-quartile (up to 25th percentile) results. First-generation US respondents also disclosed low Casper results; most were in the first- or second-quartile (up to 50th percentile). Most other-gen US respondents scored in the third- or fourth-quartile (51st to 99th percentile).

Advising Sources

Did you use prehealth advising at your undergrad institution?
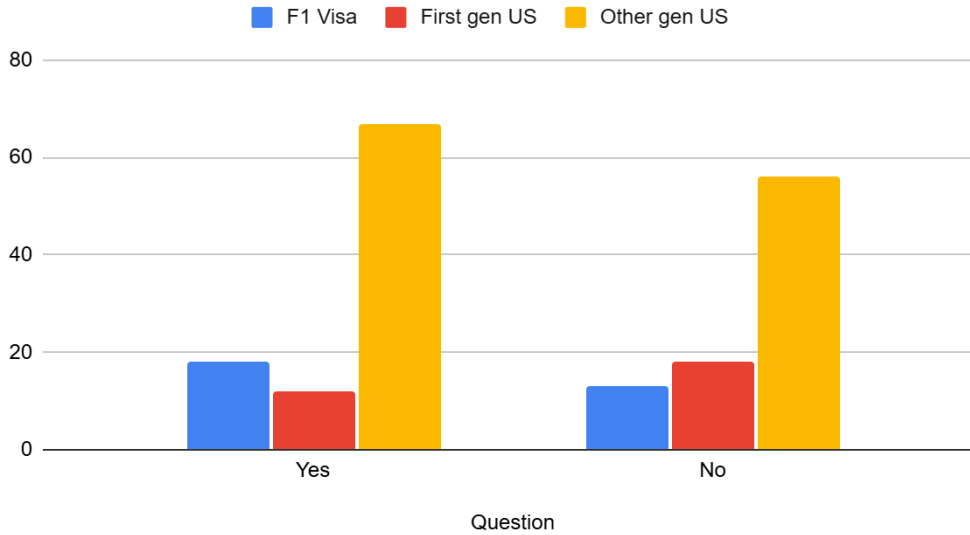
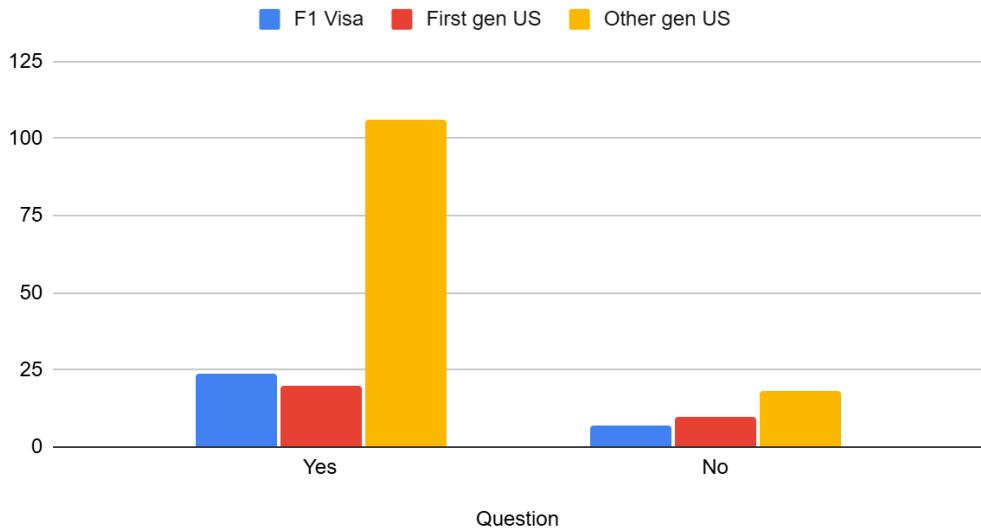## Using internet prehealth advising resources

Figure 5. Respondents were as likely to use prehealth advising resources as those who did not. However, more respondents used internet sources to prepare their applications.
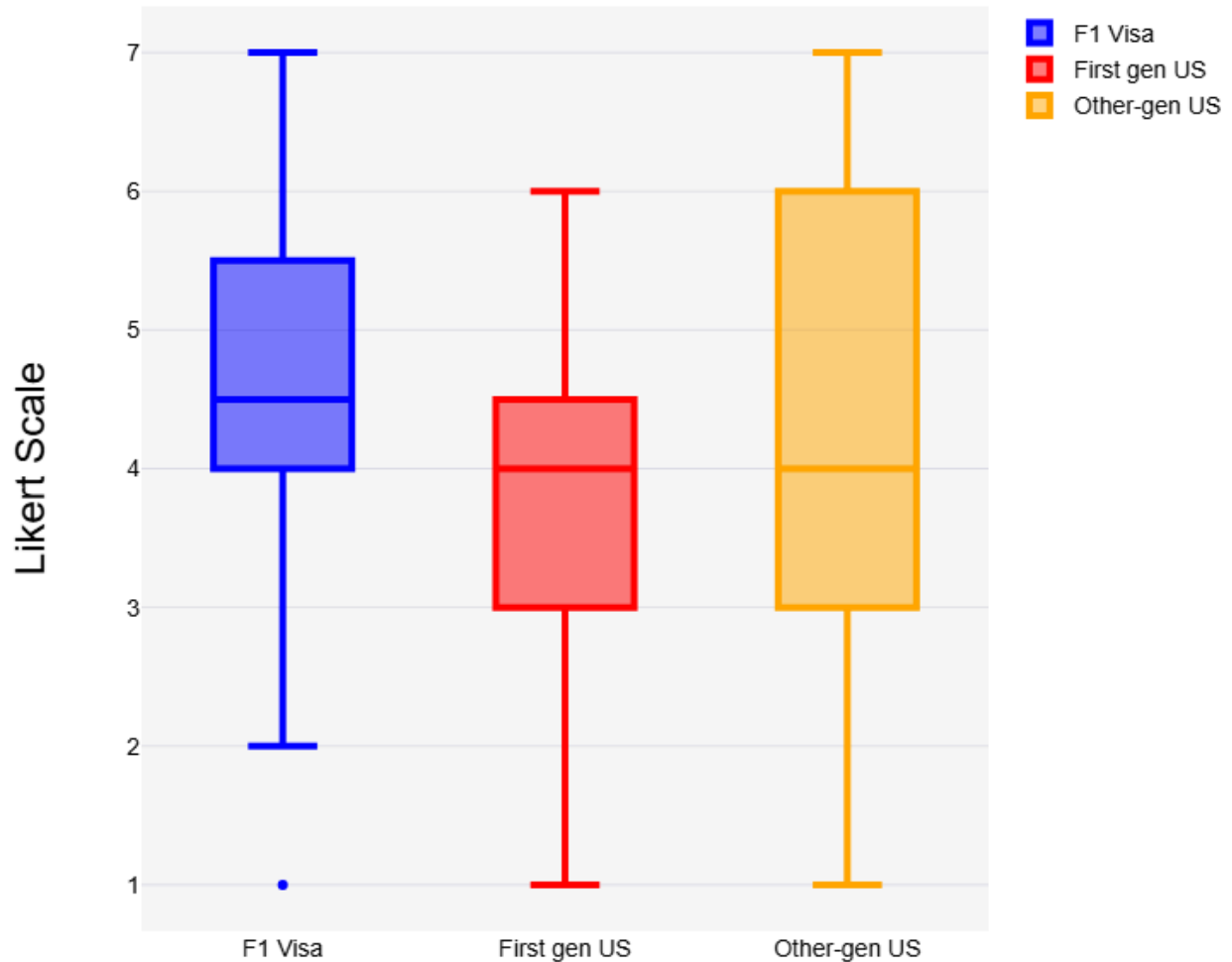
Figure 6 (shown as Figure 3 in online publication of article). Respondent satisfaction with prehealth advising. These boxplots show respondents' ratings with prehealth advising on a 7-point Likert scale (7 is most satisfied). The boxes represent interquartile range, and the median is highlighted. Analysis was performed from 16 immigrant/F1, 12 first-generation US, and 62 other-gen US respondents. Immigrant/F1 prehealth respondents generally expressed more satisfaction with undergraduate prehealth advising, while US first-generation applicants were less satisfied. The remaining respondents were satisfied with an interquartile range between 3 and 6.
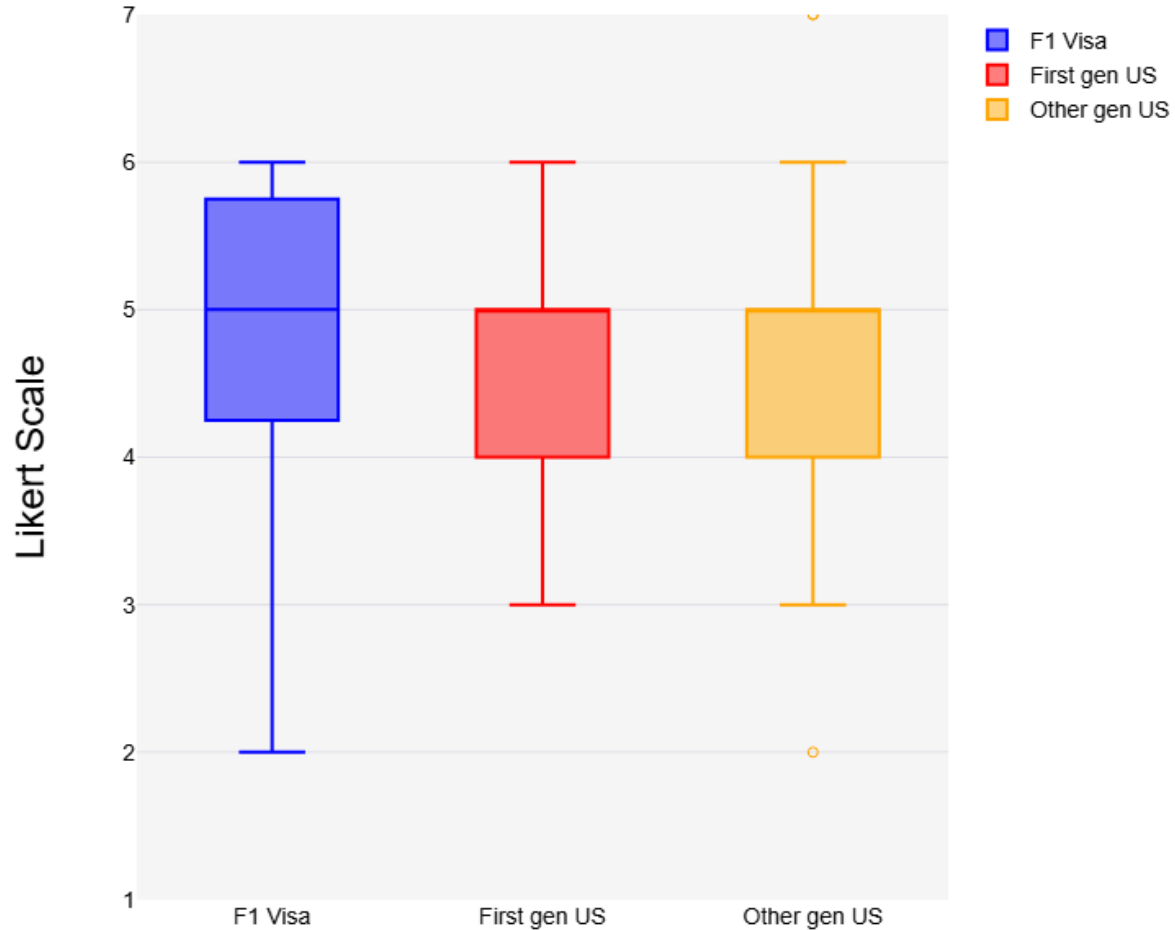
Figure 7 (shown as Figure 4 in online publication of article). Respondent satisfaction with internet advising (forums, influencers, websites, social media, online communities). These boxplots show respondents' ratings with internet-based advising on a 7-point Likert scale (7 is most satisfied). The boxes represent interquartile range, and the median is highlighted. Analysis was performed from 23 immigrant/F1, 18 first-generation US, and 93 other-gen US respondents. In general, all groups expressed similar satisfaction with internet sources (all medians were 5). IQR shows that immigrant/F1 prehealth respondents expressed more satisfaction with internet prehealth advising, while US first-generation applicants were as satisfied as other-gen US respondents.

References

Boxplots were generated with [Box and whisker plot maker - offering advanced plot with a wide range of customization options](#), statskingdom.com. Accessed April 4, 2025.

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