National Matching Services Inc.

2014 Dental Applicant Survey Report

Results and analysis of the 2014 Dental Applicant Survey and Match

May 1, 2014

Contents

1   Introduction

National Matching Services Inc. (NMS) conducted a survey of all applicants who registered for the 2014 Postdoctoral Dental Matching Program (the "Match"). The survey was developed in conjunction with the Match Steering Committee which is comprised of representatives from the American Academy of Pediatric Dentistry, Special Care Dentistry Association Council of Hospital Dentistry, American Association of Oral and Maxillofacial Surgeons, American Association of Orthodontists, American Society of Dentist Anesthesiologists and American Student Dental Association.

The purpose of the survey was to gather information on the recruitment process undertaken by applicants for dental residencies that participate in the Match. Specifically, the survey gathered information on influencing factors and outcomes of the application, interview, rankings and Match processes.

To compile this report, NMS combined the data from survey responses with ranking and Match result data from NMS databases. This report provides analysis based on applicant type and program type. Applicants are categorized as:

- US Current Seniors - applicants graduating from US Dental schools in 2014
- US Previous Graduates - applicants graduating from US Dental schools before 2014
- Foreign Graduates - applicants graduating from all Dental Schools outside the US

The program types that participate in the Match are:

- AEGD - Advanced Education in General Dentistry
- GPR - General Practice Residency
- OMS - Oral and Maxillofacial Surgery
- ORTH - Orthodontics
- PED - Pediatric Dentistry
- ANES - Dental Anesthesiology

Disclaimer

The recruitment process for dental residencies is complex and involves quantifiable and non-quantifiable factors, many of which are not addressed in this report. This report is being provided for informational purposes only and is not intended to represent any specific guidance, direction, strategy, or advice. It is a summary analysis of validated and unvalidated historic data collected by a self-selected sample of registrants in the Match.

Without prejudice to the generality of the foregoing paragraph, we do not represent, warrant, undertake or guarantee that the use of information in the report will lead to any particular outcome or result.

We will not be liable for any losses, including without limitation loss of or damage to income, anticipated savings, employment, contracts, or goodwill.

Limitations

- Data in this report is based on the responses of survey respondents and the outcomes these respondents obtained in the 2014 Match. Therefore, aggregated values presented in this report may not be the same as those reported in the annual Match statistics on the Dental Match web site.

- The survey data is self-reported and the accuracy of the responses is not verified. As such, there may be selective memory, attribution, and exaggeration issues with some responses.

- Responses to individual survey questions were optional so answers were missing for some questions which may have impacted the analysis.

- The survey was distributed after the results of the 2014 Match were released. It is possible that an individual's survey responses may have been biased by the outcome the individual received in the Match.

- The survey did not obtain any data on standardized test scores, grades, or other scalable data which may have allowed for an assessment of the quality or qualifications of applicants applying to, interviewing with and rankings programs.

2 Survey Respondents

Participation in the survey was strong. There were 1330 respondents to the survey (37% of total applicant registrations), 1231 of whom submitted a Rank Order List in the Match (46% of total applicant participants). The following four figures provide a breakdown of survey respondents by demographics, applicant type, program type of interest and outcome in the Match. Some figures include the number of Match Registrations for comparative purposes.

2.1 Demographics
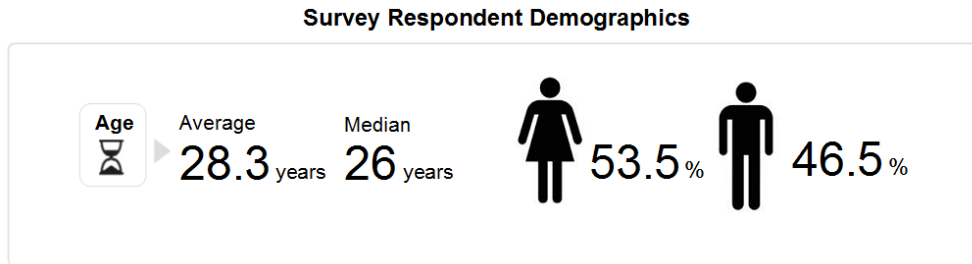
Figure 1: Age and gender of survey respondents

2.2 By Applicant Type

The breakdown of survey respondents is compared with the total number of 2014 Match registrations by applicant type. On a relative basis, the ratio of survey respondents to Match registrations for US Previous Graduates was lower than the ratio for US Current Seniors or Foreign Graduates.
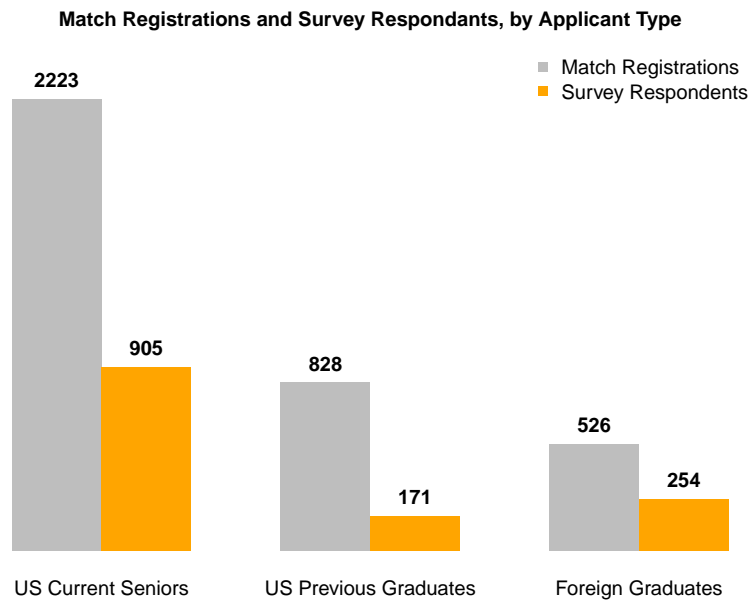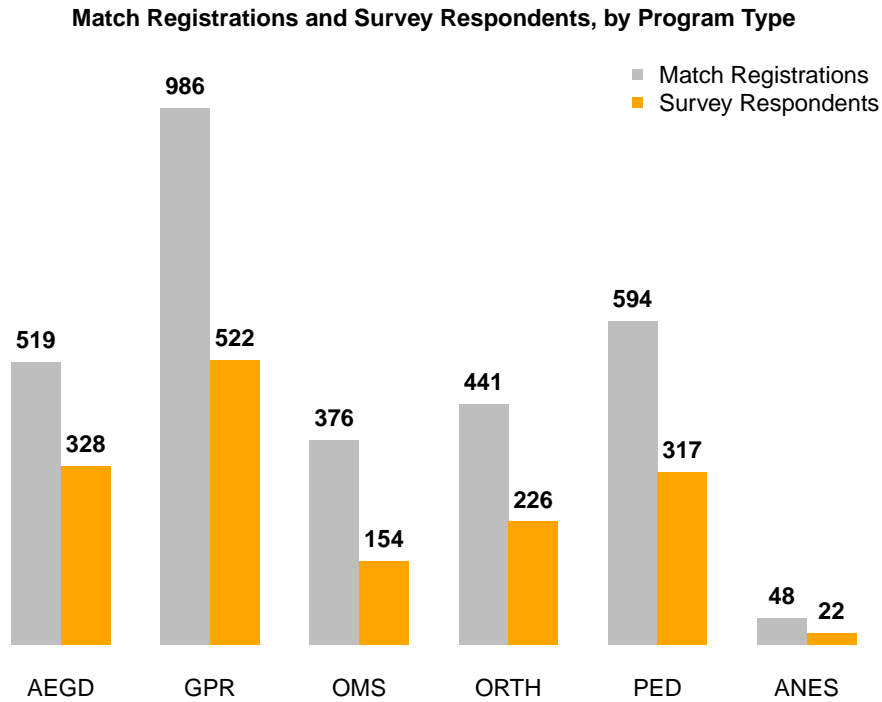

Figure 2: Match Registrations and survey respondents by applicant type

2.3   By Program Type

The survey response was large enough to provide statistically significant samples at reasonable confidence levels and intervals for applicant analysis by program type, with the exception of ANES.

Match Registrations and Survey Respondents, by Program Type

Match Registrations are based on the program types ranked by the applicant, while the survey respondents are based on the program types to which the applicant applied.

Applicants applying to more than one program type are counted in the distributions of each of program type to which the applicant applied.

Figure 3: Match registrations and survey respondents, by program type

2.4 By Applicant Outcome

Applicants who withdrew from the Match or did not submit a Rank Order List for the Match are categorized as Non Participants. Overall, the survey had a higher response rate from matched applicants (55%) than from unmatched applicants (29%) or non-respondents (11%).
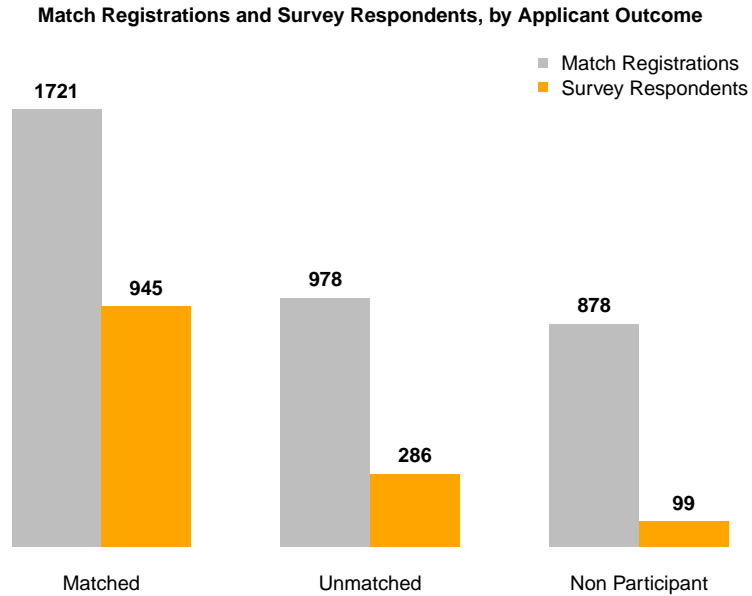
Match Registrations and Survey Respondents, by Applicant Outcome

Figure 4: Match registrations and survey respondents by applicant outcome in the Match.

3 Applications

This section provides information on the timing when applicants began identifying programs of interest, sources of information in applicants' search for programs, factors influencing applicants' decision to apply to programs and a distribution of the number of applications submitted by program type.

3.1 Timing for Identifying Programs of Interest

Over one quarter of applicants began identifying programs of interest for their residency placement in 2014 by January 2013, more than one year before the applicant might expect to start their training. By June, approximately 73% of applicants had started their search for programs.
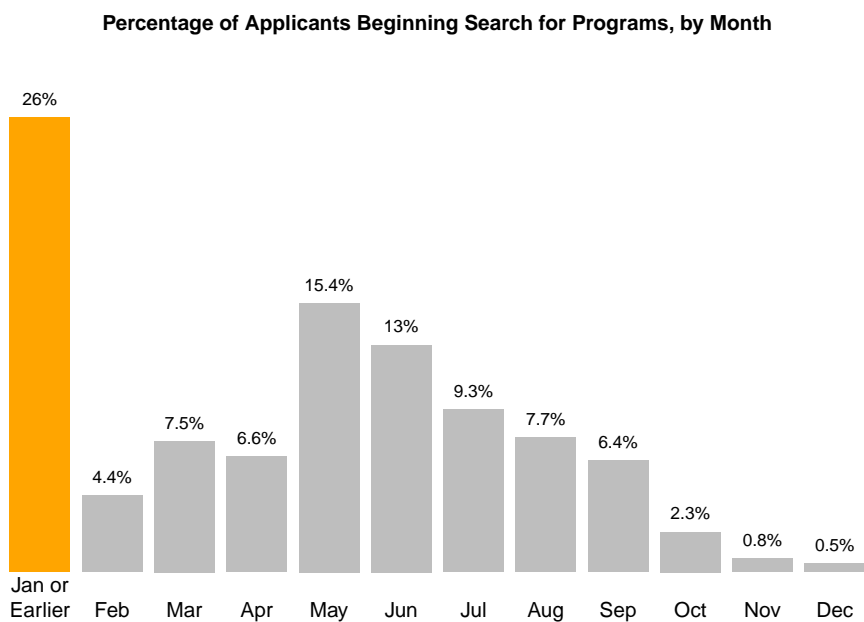
Percentage of Applicants Beginning Search for Programs, by Month

Figure 5: Percentage of applicants beginning search for programs of interest by month

3.2   Sources of Information on Programs

Applicants were asked to evaluate the usefulness of various sources of information on dental residency programs. Evaluations were made on a five point scale.

- 1 - Not useful at all
- 2 - Slightly useful
- 3 - Moderately useful
- 4 - Quite useful
- 5 - Extremely useful

It is helpful to consider two type of sources: primary sources which are provided directly by an individual program, and third-party sources which are resources that aggregate information on programs. The ADEA PASS Program Search Engine was rated as the most useful source of information on programs. The Dental Match web site, which provides up to date information on program participation in the Match, was rated to be the second most useful third-party source of information. Primary sources of information were rated as the second and third most useful sources of information.

Average Usefulness of Sources of Information in Search for Programs of Interest
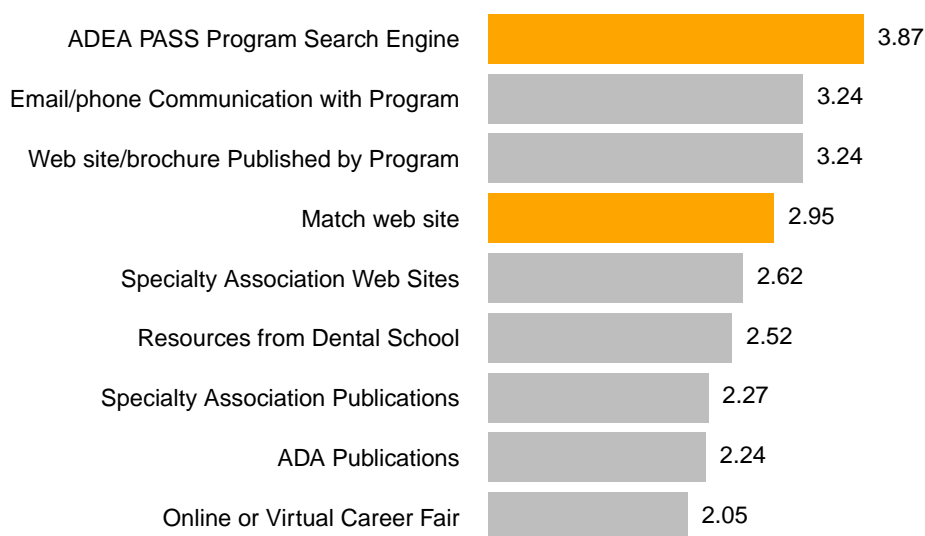

Figure 6: Average usefulness of sources of information in search for programs of interest

3.3   Factors Influencing Applicants' Decision to Apply

Applicants were asked to rate the importance of various factors in influencing their decision to apply to a program. Importance was rated on a five point scale.

- 1 - Not at all important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Quite important
- 5 - Extremely important

On average, all factors were considered at least *Moderately important*. The average rating for each factor ranged from 2.8 to 4.5.

The chart below ranks each factor from most important to least important and segments the ratings by each applicant type. Quality of curriculum and training, quality of faculty, and reputation of program ranked in the top four most important factors for all applicant types. Size of program and size/diversity of caseload were more important to Foreign Graduates than to their US counterparts, while feedback from current or past residents and geographic location were more important for US graduates than for foreign graduates.
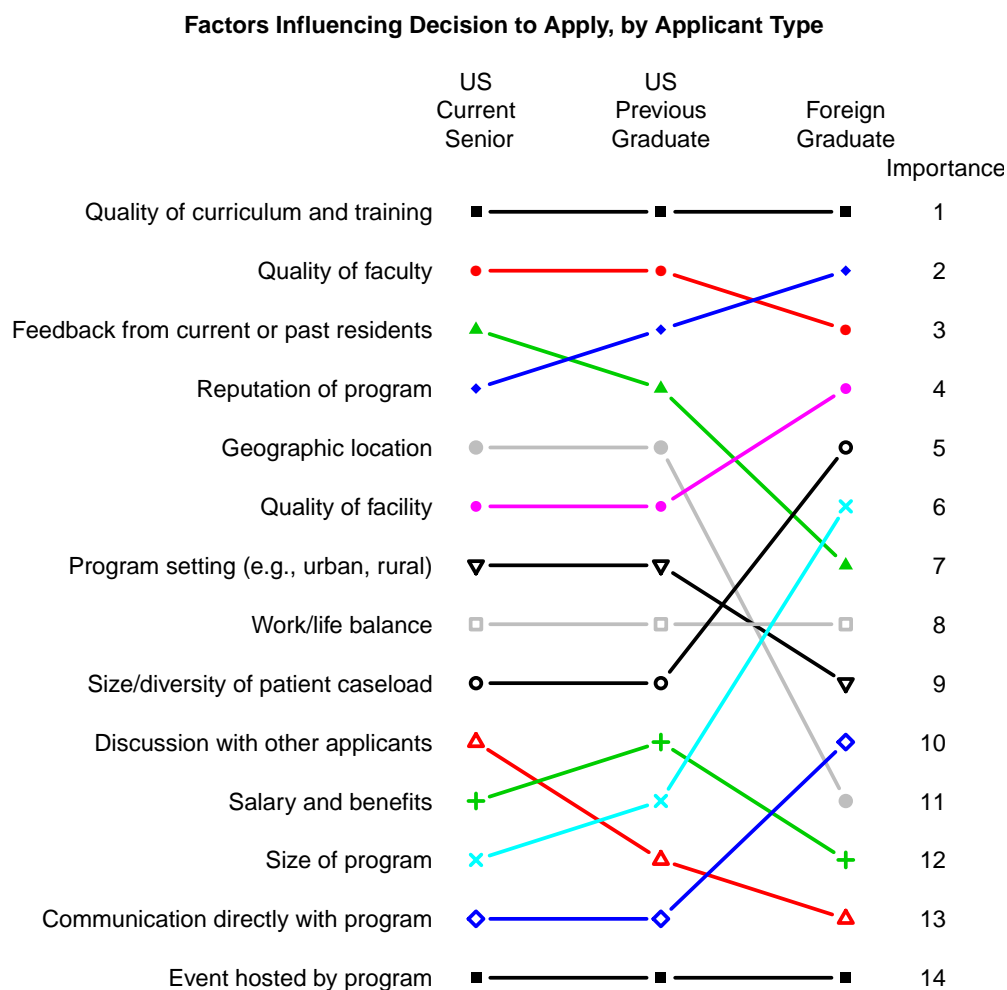
Factors Influencing Decision to Apply, by Applicant Type

Figure 7: Factors influencing decision to apply, by applicant type

3.4   Average Number of Applications Submitted

Boxplots for the number of applications submitted, by program type are shown below. The orange dot represents the median number of applications submitted. The inner end of the grey lines, closest to the median dot, represent the 25th and and 75th percentiles. The outer ends of the grey lines are the minimums and maximums, excluding outliers. Outliers are represented by grey dots. Note: The scale has been adjusted to remove some outliers to allow for easier viewing of the data.

Applicants applying to OMS programs submitted the most applications, on average. Applicants to AEGD, GPR and ANES programs submitted the least. PED and ORTH applicants submitted a similar average number and range of applications.
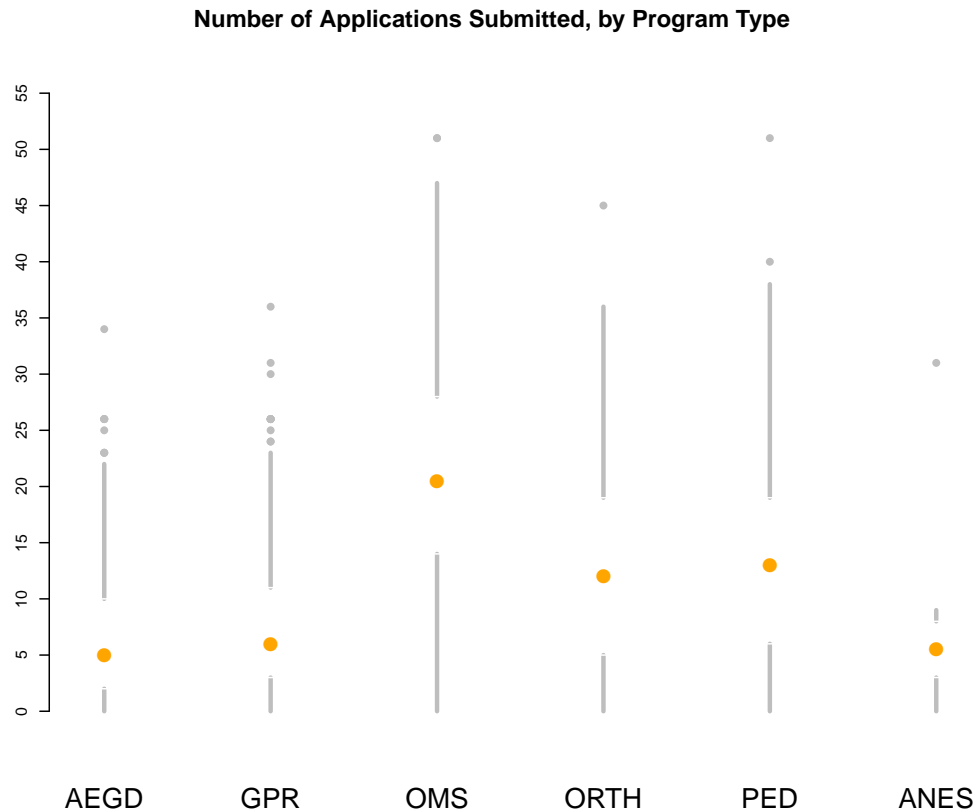
Applications submitted by applicants applying to more than one program type are counted in the distributions of each of program type to which the applicant applied.

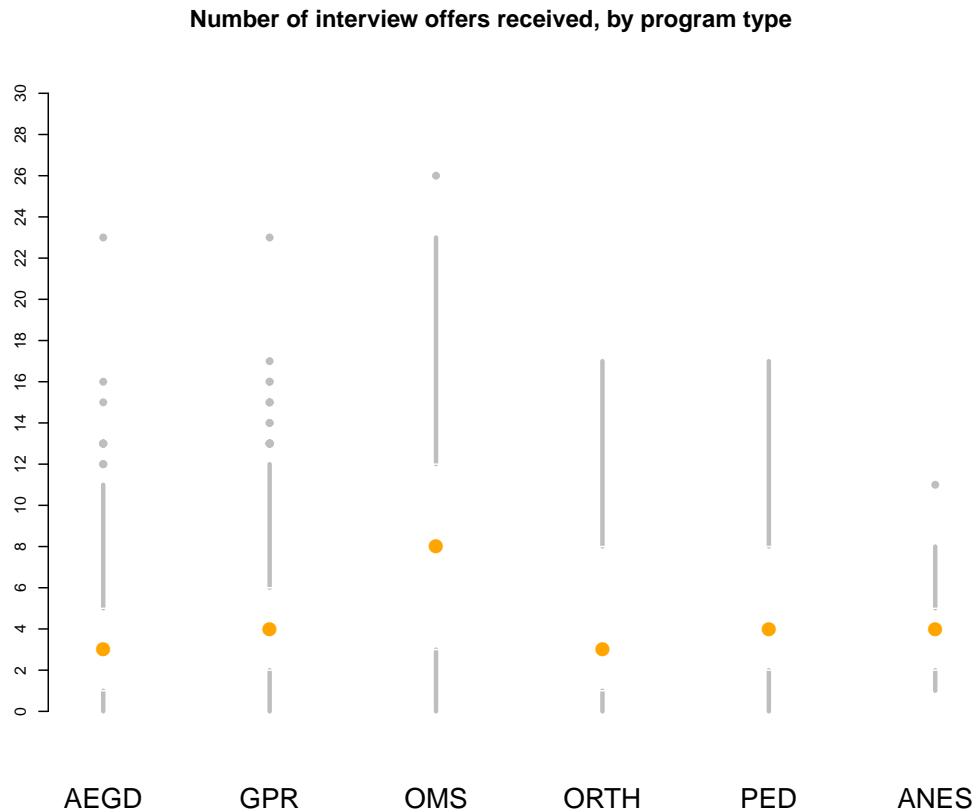Figure 8: Number of applications submitted, by program type

4 Interviews

This section provides information on the number of interview offers received and the ratio of interview offers received to applications submitted.

4.1 Average Number of Interview Offers Received

Boxplots for the number of interview offers received, by program type to which the applicant applied are shown below. The orange dot represents the median number of applications submitted. The inner end of the grey lines, closest to the median dot, represent the 25th and and 75th percentiles. The outer ends of the grey lines are the minimums and maximums, excluding outliers. Outliers are represented by grey dots. Note: The scale has been adjusted to remove some outliers to allow for easier viewing of the data.

The distributions of interview offers received is similar to the distributions for the applications submitted in Figure 8, but with a lower range. OMS applicants received the highest number of interview offers, on average.

Number of interview offers received, by program type

Interview offers received by applicants applying to more than one program type are counted in the distributions of each of program type to which the applicant applied.

Figure 9: Number of interview offers received, by program type

4.2   Application Success Ratio

The application success ratio is calculated by dividing the number of interview offers received by the number of applications submitted. The ratio is shown below by applicant type. US Current Seniors had the highest application success ratio which was nearly 50%, and 12% higher than the ratios for US Previous Graduates and Foreign Graduates respectively.

Percentage of Applications Resulting in Interviews

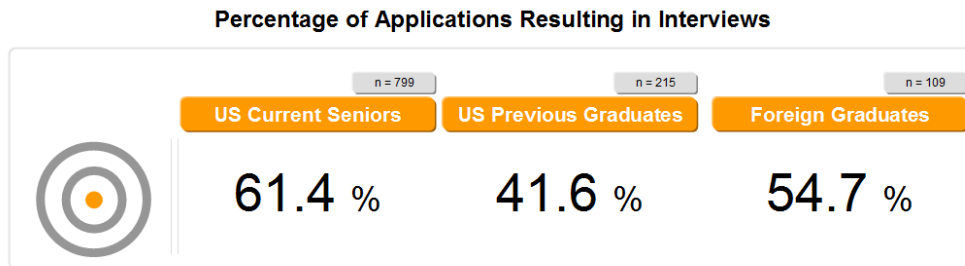| n = 799	n = 215	n = 109
US Current Seniors	**US Previous Graduates**	**Foreign Graduates**
61.4 %	41.6 %	54.7 %

Figure 10: Percentage of applications resulting in interviews, by applicant type

5 Rankings

This section provides information on the tools used by applicants to determine their ranking preferences and the factors that influenced applicants' decision to rank a program.

5.1 Tools Used to Determine Ranking Preferences

Applicants were asked which tools, if any, they use to help determine their ranking preferences for the Match. The majority of applicants used qualitative assessment techniques, like a list of pros and cons or their "gut-feel" to determine their preferences. A quantitative analysis was was used by less than 10% of applicants.

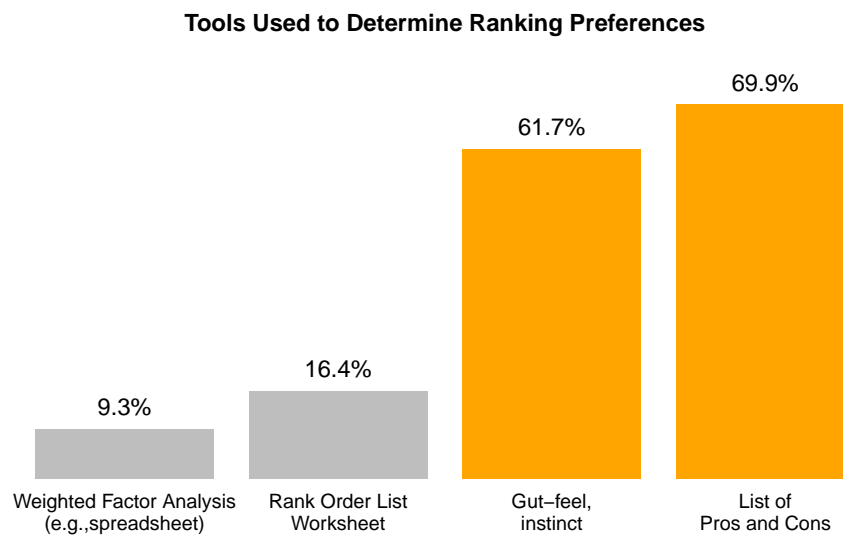**Tools Used to Determine Ranking Preferences**

Figure 11: Percentage of applicants using various tools to determine ranking preferences

5.2 Factors Influencing Applicants' Decision to Rank

Applicants were asked to rank the importance of various factors in influencing their decision to rank to a program. The importance was rated on a five point scale.

- 1 - Not at all important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Quite important
- 5 - Extremely important

The chart below ranks each factor from most important to least important and segments the ratings by each applicant type. On average, all factors were considered at least *Moderately important.* The average rating for each factor ranged from 3.2 to 4.3.

Quality of curriculum and training and quality of faculty were in the top three factors for all applicant types. These were the same top factors cited in influencing an applicant's decision to apply as shown in figure 7. This suggests that applicants may have a strong notion of which programs will be ranked, regardless of the feedback or information received during the interview.


Figure 12: Factors influencing decision to rank, by applicant type

5.3 Average Number of Ranks Submitted

Boxplots for the number of ranks submitted by respondents, by program type to which the applicant applied are shown below. The orange dot represents the median number of applications submitted. The inner end of the grey lines, closest to the median dot, represent the 25th and and 75th percentiles. The outer ends of the grey lines are the minimums and maximums, excluding outliers. Outliers are represented by grey dots. Note: The scale has been adjusted to remove some outliers to allow for easier viewing of the data.

OMS applicants submitted the highest number of ranks on their Rank Order Lists.

Total Number of Rankings Submitted, by Program Type
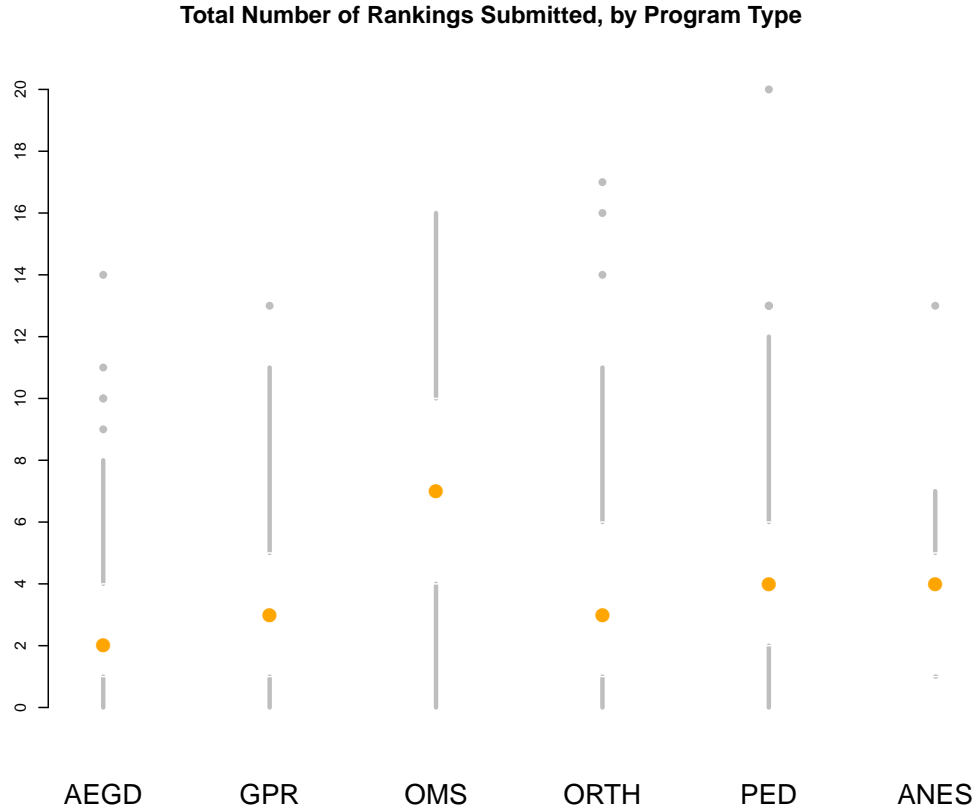
The data reported here is close to but not entirely consistent with similar calculations reported in the annual Match statistics on the Dental Match web site. This figure includes data only for respondents to the survey while the Match statistics include data for all individuals who participated in the Match.

The number of rankings submitted by applicants applying to more than one program type are counted in the distributions of each of program type to which the applicant applied.

Figure 13: Number of ranks submitted, by program type

6 Results

This section provides information on the results obtained by applicants in the Match, segmented by various survey and Match data. The following figures provide a breakdown of applicant results by gender, month when applicant began searching for programs of interest, number of applications submitted, number of interview offers received, and the length of an applicant's Rank Order List.

6.1 Results by Gender

The percentage of respondents, applications submitted, interview offers received, rankings submitted, and matches are broken out by gender below. Women made up the majority of survey respondents. In absolute terms, they also received a majority of the interviews offered, submitted a majority of the rankings and obtained a majority of the matches. However, their share of applications submitted, interview offers received and rankings submitted was less than the proportional share of their responses.

Applicant Results by Gender

■ Female   ■ Male

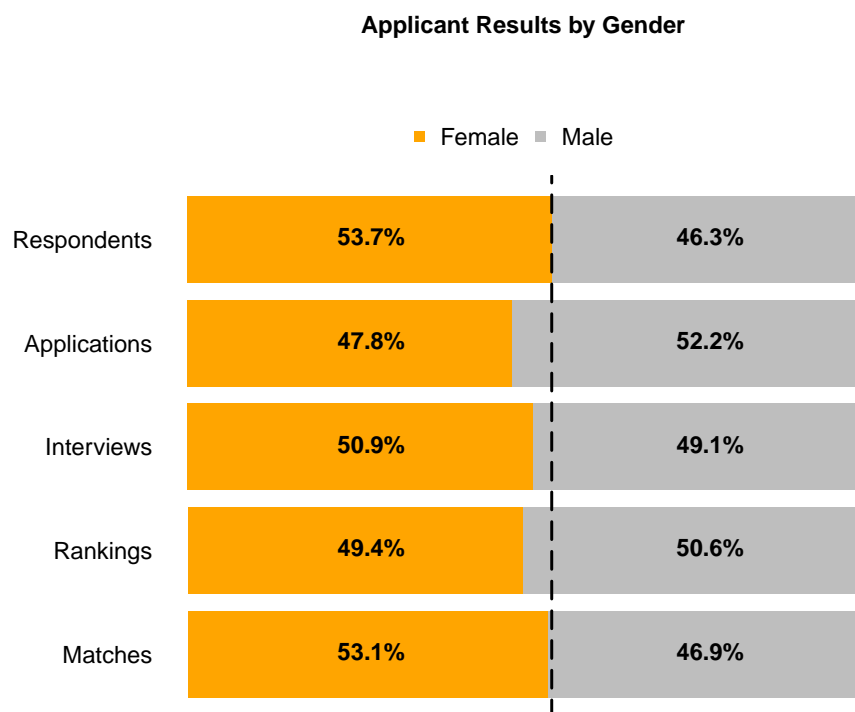|	Female	Male
Respondents	53.7%	46.3%
Applications	47.8%	52.2%
Interviews	50.9%	49.1%
Rankings	49.4%	50.6%
Matches	53.1%	46.9%

Figure 14: Percentage of applications, interviews, rankings and matches, by gender

6.2   Match Rate By Month Applicant Began Search for Programs of Interest

Applicants who began their search for programs of interest in October, November and December had lower Match rates than applicants who began their search earlier on in the recruitment cycle.
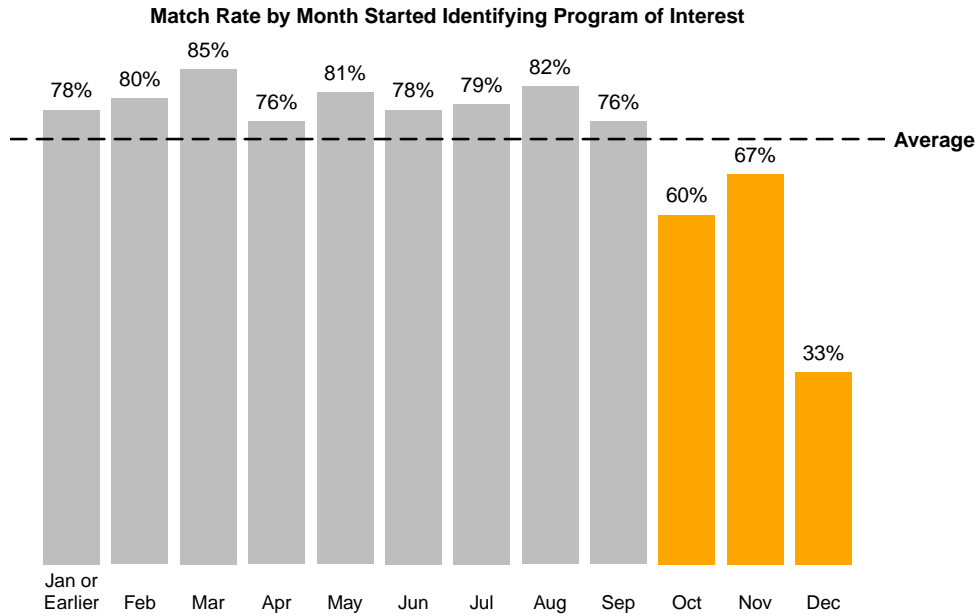
This figure inludes only those applicants that submitted rankings for the Match.

Figure 15: Match Rate by month applicant began identifying programs of interest

6.3   Match Rate by Total Number of Applications Submitted

Match rates are segmented by the total number of applications submitted. Match rates increase with the number of applications submitted, up to a limit. Applicants who submit the most applications do not have better Match rates than those who submit applications in the mid-range of the distribution. On average, submitting more than 15 applications does not substantially improve an applicant's chances of matching. The limit varies by program type, but the general rule is consistent.

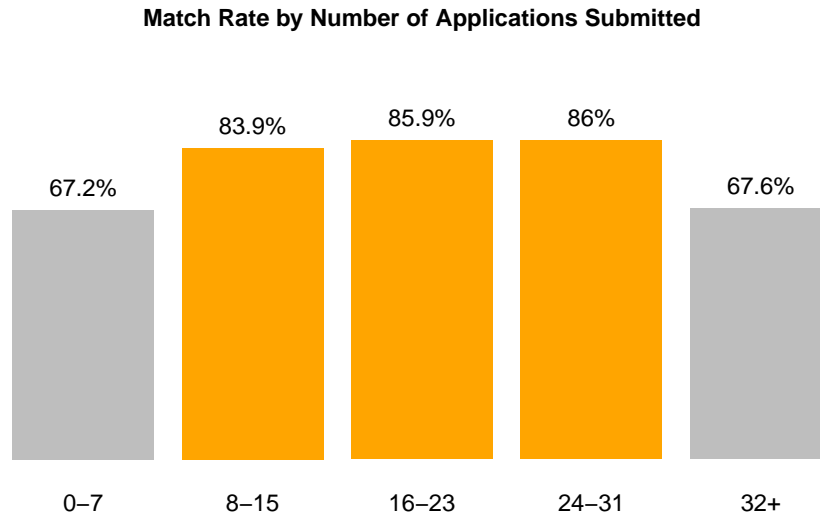**Match Rate by Number of Applications Submitted**

Figure 16: Match Rate by Number of Applications Submitted

6.4   Match Rate by Total Number of Interview Offers Received

Interviews are a signal of interest in an applicant by a program. Match rates increase with the number of interview offers received.

The number of interview offers received is the most significant predictor of Match outcome in a multi-variable regression of Match outcome on gender, age, month when applicants began identifying programs, number of applications submitted, number of rankings submitted and number of interview offers received.

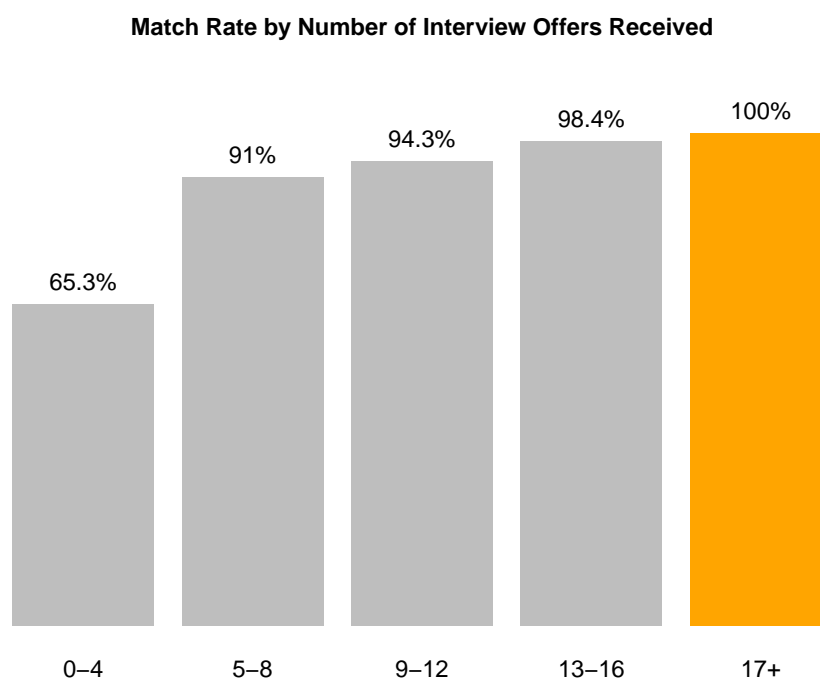**Match Rate by Number of Interview Offers Received**

Figure 17: Match rate by number of interview offers received

6.5   Match Rate by Length of Rank Order List

Similar to applications, there is a positive correlation between Match Rate and the number of rankings on an applicant's Rank order List, up to a point. While applicants should rank all programs to which they would be willing to accept a position, there are occurrences where applicants submit rankings of programs where they are have not applied or interviewed.

Applicants should ranks all programs where they would be willing to accept a position. Adding programs to a Rank Order List where an applicant is not being considered does not improve the probability of matching.
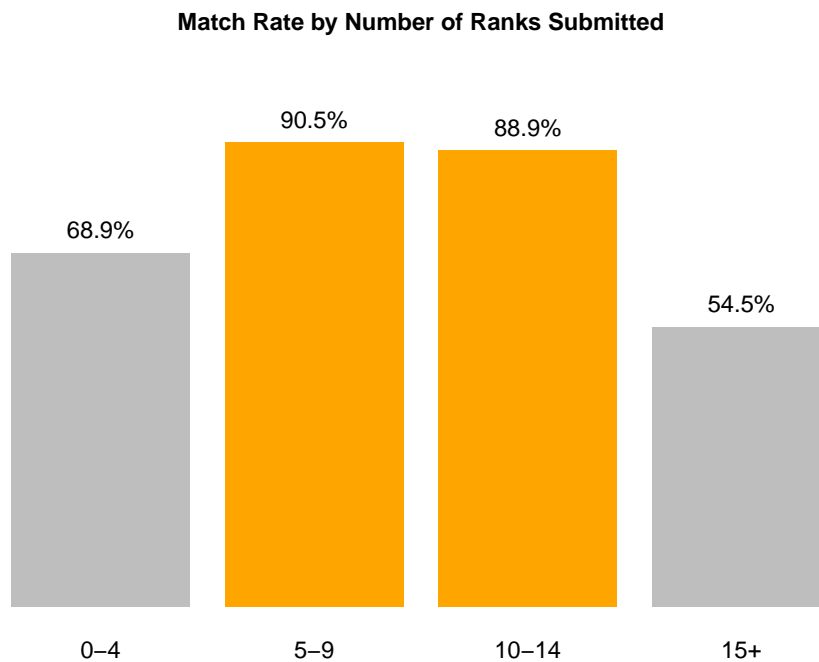
Match Rate by Number of Ranks Submitted

Figure 18: Match rate by length of rank order list