Otomatch, AAMC and NRMP: How Do They Match Up? Comparison of Applicant Data for Individuals Applying to Otolaryngology Residency

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INTRODUCTION

- Otolaryngology has a highly competitive residency application process with currently more applicants than positions available annually.

- Otomatch.com, founded in 2001, is a highly utilized website created to address otolaryngology Match-related questions and concerns, including a public spreadsheet for applicants to enter personal application statistics and match statistics

- The goal of this study is to assess the accuracy of the self-reported academic metrics on Otomatch.com with official statistics from the National Residency Match Program (NRMP) Charting Outcomes Report and Association of American Medical Colleges (AAMC) Report on Residents.

METHODS

- Data was collected from publicly editable Otomatch forums (2017-2018, 2018-2019, 2019-2020) and curated Otomatch survey responses (2018-2019, 2019-2020) whose results are released after Match Day.

- Aggregated data was collected from the NRMP Charting Outcomes in the Match (2017-2018, 2019-2020) and AAMC Report on Residents (2017-2018, 2018-2019).

- Measures of interest included Step 1 scores, Step 2 CK scores, publications, number of interview invitations, number of interviews attended, and AOA status.

- ANOVA and two tailed T tests were performed to compare variables within each match year.
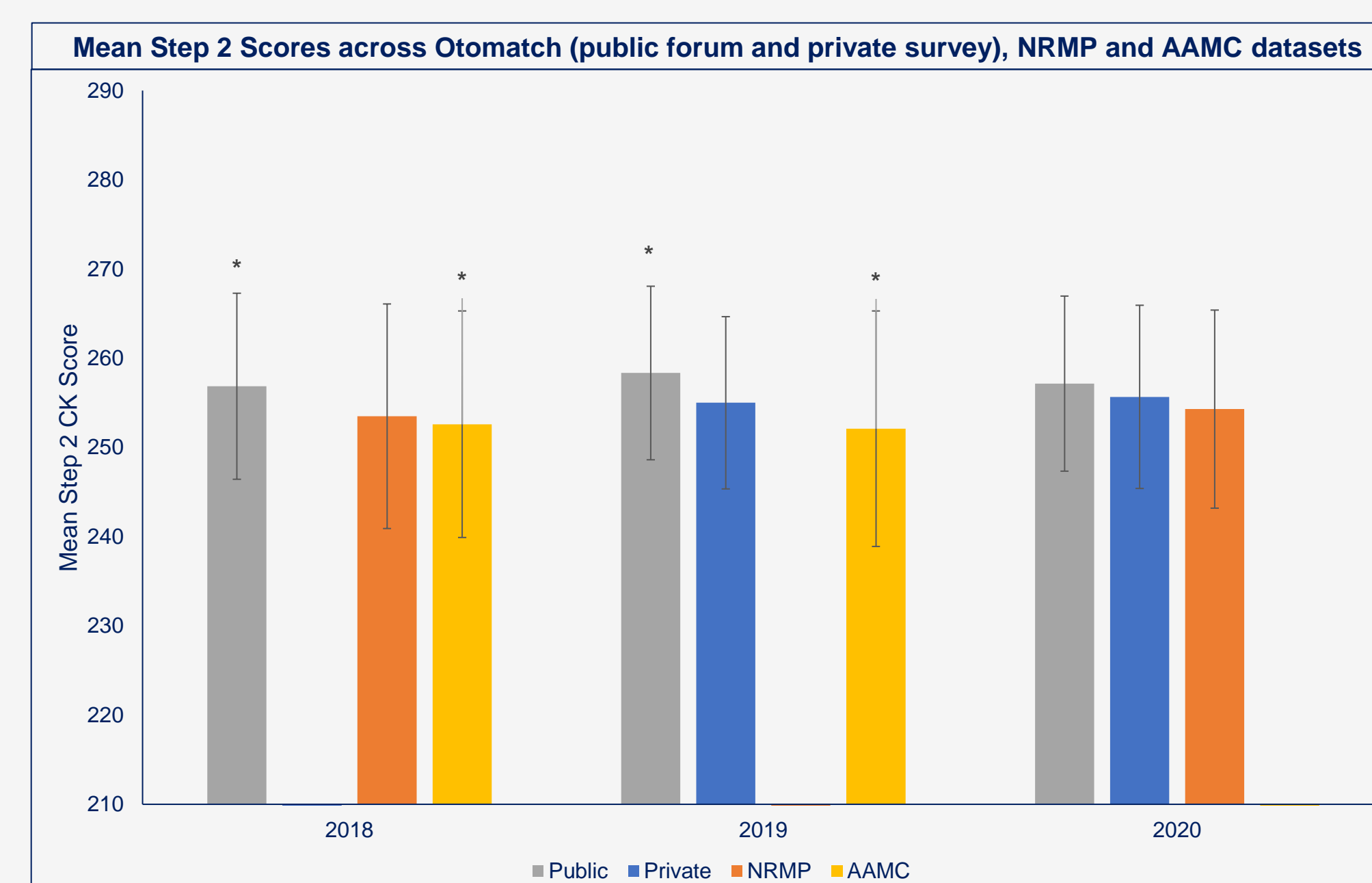
- Statistical significance was set at $p \leq 0.05$

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RESULTS

Application Statistics from Otomatch Forum Spreadsheet 2018, NRMP Charting Outcomes 2018, and AAMC First Year Resident Survey 2018				
Measure	Otomatch Public Forum (n=85)	NRMP Charting Outcomes (n=288)	AAMC First Year Resident Survey (n=304)	p-value
Step 1	248.2	247.6	246.8	0.4927
Step 2	**256.9**	**253.5**	**252.6**	**0.0234**
Publications	11.4	10.2	9.6	0.3269
Number of Programs Ranked	14.4	13.9	-	0.3400
Percent AOA	38.8	38.7	-	0.9626

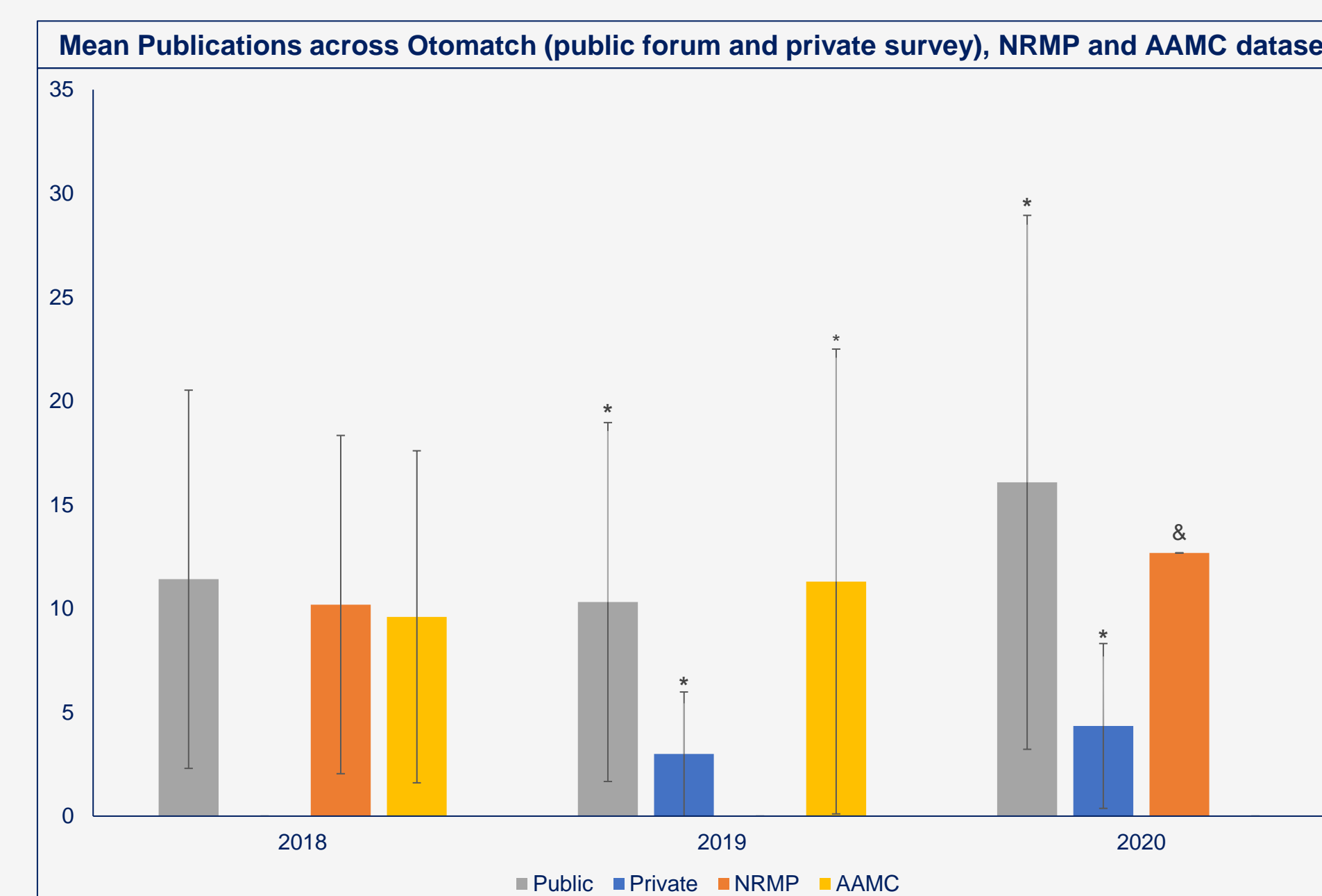| Application Statistics from Otomatch Forum Spreadsheet 2019, Otomatch Survey Responses 2019, and AAMC First Year Resident Survey 2019				
Measure	Otomatch Public Forum (n=95)	Otomatch Private Survey (n=101)	AAMC First Year Resident Survey (n=309)	p-value
Step 1	249.9	248.1	246.7	0.0735
Step 2	**258.3**	**255.0**	**252.1**	**<0.0001**
Interview Invites	15.6	16.1	-	0.5320
Interviews Attended	12.4	12.2	-	0.6950
Matched at Rank X	2.8	3.3	-	0.4320
Match Rate	1.00	0.91	-	-
Publications	10.3	3.0*	11.3	<0.0001
Number of Programs Ranked	-	12.2	-	-
Percent AOA	48.8	-	-	-

*In the Otomatch public forum and NRMP data, publications were defined as the total number of publications, posters, and oral presentations, while in the private survey they were asked to enter the total number of published peer reviewed publications.

Application Statistics from Otomatch Forum Spreadsheet 2020, Otomatch Survey Responses 2020, and NRMP Charting Outcomes Report 2020				
Measure	Otomatch Public Forum (n=64)	Otomatch Private Survey (n=76)	NRMP Charting Outcomes (n=395)	p-value
Step 1	249.2	249.2	246.8	0.0849
Step 2	257.2	255.7	254.3	0.4980
Interview Invites	16.5	18.6	-	0.2573
Interviews Attended	**8.9**	**12.8**	**-**	**0.0001**
Matched at Rank X	-	3.0	-	-
Match Rate	-	0.94	0.76	-
Publications	16.1	4.3*	12.7	<0.0001
Number of Programs Ranked	-	12.9	11.6	0.0972
Percent AOA	42.6	39.0	34.2	0.3622

*In the Otomatch public forum and NRMP data, publications were defined as the total number of publications, posters, and oral presentations, while in the private survey they were asked to enter the total number of published peer reviewed publications.

Mean Step 2 Scores across Otomatch (public forum and private survey), NRMP and AAMC datasets

* = p < 0.05 on student t-test

Mean Publications across Otomatch (public forum and private survey), NRMP and AAMC datasets

* = p < 0.05 on student t-test; & = missing SD, unable to conduct statistical analysis

DISCUSSION

- Otomatch vs. AAMC/NRMP
  - We found differences between Otomatch and NRMP/AAMC data in mean Step 2 CK scores and publications.
  - We found no significant difference between Otomatch and NRMP/AAMC data in mean **Step 1 score**, **mean number of programs ranked**, and **percentage of applicants inducted into AOA**.
  - Match Rate was higher in Otomatch than NRMP data

- Otomatch Private Survey vs Public Forum
  - Differences in Interview Invites & Interviews Attended between the Otomatch public forum and private survey, varied by year.

- The differences found in academic metrics are due to data collection artefacts rather than true differences.
  - Step 2 CK - due to rounding effects
  - Publications - differences in the definition of a publication

CONCLUSION

- Our findings suggest that online platforms such as Otomatch.com can provide accurate, anonymous, and crowdsourced application statistics for applicants.

- This study will be the basis of future studies on online forums such as Otomatch.com as important changes to residency applications are on the horizon.

REFERENCES

- National Residency Matching Program, Charting Outcomes in the Match, 2018, 2020. National Resident Matching Program, Washington, DC. 2020.
- American Association of Medical Colleges, Report on Residents, 2018, 2019. American Association of Medical Colleges, Washington, DC. 2020.

ACKNOWLEDGEMENTS

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