

The quality of dermatology match information on social media platforms: a cross-sectional analysis

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The quality of dermatology match information on social media platforms: a cross-sectional analysis

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Abstract

The dermatology match is a highly discussed topic, and creators online often comment about the qualifications needed to match. Social media posts can share differing advice with potential misinformation that can cause excess stress and deter students interested in dermatology. We aimed to assess the quality of online information about the match process, with sources from Reddit, Student Doctor Network (SDN), and TikTok. In March 2024, "How to match into dermatology" and "Advice for the dermatology match process" was searched on these platforms, and 34 sources were assessed for the information source and specific advice for application components such as USMLE scores, research experiences and clinical interests, clerkship grades, and away rotations. Online material was compared with the official National Residency Matching Program (NRMP) 2022 match data using student t-test's for mean USMLE scores and research experiences. We collected information on media recommendations regarding research years, clerkship grades, medical school rankings, AOA status, broad vs focused dermatology and volunteer interests, away rotations, and dual applications. 10 Tik-Tok videos, 15 Reddit posts, and 10 SDN posts were included in the study. The NRMP and online media data differed significantly among mean Step 1 scores (248 vs 254.5, $p<0.001$), number of abstracts, posters, and publications (20.9 vs 23.3, $p<0.01$), and number of total publications (7 vs 13.2, $p<0.001$). The NRMP and online data did not differ significantly among mean Step 2 scores (257 vs 261.0, $p=0.06$). Of the 22 total articles that discussed a potential research year, 16 articles recommended taking a research year during medical school (72.7%). Fifteen total articles mentioned grades during medical school, and 10 of these articles explained the importance of attaining AOA status (66.7%), compared to the NRMP data which shared that 39.7% of matched dermatology residents attained AOA status. Six articles commented on students pursuing focused vs broad interests in dermatology, and 3 (50%) articles recommended having broad interests in dermatology, while 3 (50%) discussed having niche interests. Twenty-one articles covered the topic of away rotations, of which 19 (90.5%) recommended doing an away rotation. Eleven articles discussed a number (mean 3.9 away rotations), whereas 8 (38.0%) articles said to complete as many away rotations as possible, in contrast to the official APD letter which recommends completing no more than 2 away rotations. Media found online does not match the AAMC-verified data or current APD statements. Accredited programs should consider releasing a statement regarding match information to dispel common rumors.

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To the editor,

The transition of USMLE Step 1 to pass/fail and a new system for signaling interest in

programs has complicated the competitive dermatology match process.[1] Candidates frequently use social media for guidance, but advice on these platforms can be misleading and potentially discourage applicants. Our study evaluates the accuracy of dermatology match information on popular social media sites where medical students, residents, and attendings discuss medicine and residency application processes: Reddit, Student Doctor Network (SDN), and TikTok.

In March 2024, we used the search terms "how to match into dermatology" and "advice for the dermatology match process," identifying 34 sources and corresponding response comments from TikTok (10), Reddit (14), and SDN (10). These sources provided insights into application components including USMLE scores, research experiences, and rotations, which we compared to official 2022 National Residency Matching Program (NRMP) data using Student's t-tests to identify differences in quantitative measures. Representative quotes were qualitatively compared to NRMP data and the Association of Professors of Dermatology (APD) Residency Program Directors Section Information Regarding the 2023-2024 Application Cycle guidelines.[2] Inclusion criteria required at least one numeric data point for comparison.

Our analysis revealed mean Step 1 scores (248.0 vs. 254.5, $p < 0.001$), the number of abstracts, posters, and publications (20.9 vs. 23.3, $p < 0.01$), and total publications (7.0 vs. 13.2, $p < 0.001$) reported online were significantly higher than NRMP data (Table 1). The NRMP and online data did not significantly differ in mean Step 2 scores (257.0 vs. 261.0, $p = 0.06$).

Representative quotes are found in Table 2. Regarding academic performance, 15 sources addressed medical school grades, with 10 (66.7%) emphasizing the importance of Alpha Omega Alpha (AOA) status, compared to 39.7% of matched residents who achieved this status. Nineteen of 21 sources (90.5%) recommended participation in away rotations. Eleven of these (52.3%) provided a specific number, averaging 3.9 rotations, while 8 (38.0%) suggested completing as many as possible — contradicting APD guidelines, which recommends a maximum of two external rotations for students with home dermatology programs and three for those without.[2]

Online sources were also divided about the utility of a research year. Of the 22 sources discussing research years, 16 (72.7%) supported it to increase applicants' number of research experiences, and 6 (27.3%) articles advocated against taking a research year to match, without a genuine underlying interest in the research.

This study is the first to systematically evaluate the veracity of post-USMLE pass/fail Step 1 discussions across multiple social media platforms. Previous studies on self-reported SDN and Reddit data showed mixed results; a 2017 study found radiology applicants self-reporting on SDN were likelier to be AOA members with higher USMLE step scores, indicating a reporting bias toward stronger applicants, likely reflected in our study as well.[3] In contrast, a 2020 study found no significant difference between self-reported dermatology applicant USMLE step 1 and 2 scores on social media and NRMP data.[4] However, these earlier studies predate the USMLE Step 1 pass/fail change and did not specifically examine these forum discussions directly. Our study expands the scope by including TikTok, a platform increasingly used for medical education among students.[5]

Our findings suggest potential biases in self-reported data on social media compared to official sources, underscoring the need for cautious interpretation. Our limitations include the inherent self-reporting nature of social media, which may not accurately reflect the broader applicant pool. While many contributors online aim to help others, some may exaggerate requirements or overstate match difficulties to discourage competition.

In conclusion, while social media serves as a widely used resource for dermatology applicants, it is often unreliable. Program director surveys could help clarify common misconceptions, and efforts to correct misinformation through trusted sources may improve the accuracy of information available to applicants. Applicants seeking reliable guidance should turn to established mentorship programs, such as the National Mentorship Match through the Dermatology Interest Group Association, and official recommendations from the Association of Professors of Dermatology. By providing structured, accurate resources, programs can help counter

misinformation and better support future applicants.



References:

1. Parker, T., Brown, A. E., Messer, A., & Lewis, G. D. (2020). Response to: “Reliability of self-reported data on social media vs National Residency Match Program charting outcomes for dermatology applicants.” *Journal of the American Academy of Dermatology*, 83(6), E473-E474. <https://doi.org/10.1016/j.jaad.2020.07.129>
2. Association of Professors of Dermatology Residency Program Directors Section Information Regarding the 2023-2024 Application Cycle. (2023). Retrieved March 27, 2024, from <https://students-residents.aamc.org/media/12386/download>.
3. Sura K, Wilson LD, Grills IS. Comparison of Self-Reported Data on Student Doctor Network to Objective Data of the National Resident Matching Program. *J Am Coll Radiol*. 2017 Dec;14(12):1594-1597. doi: 10.1016/j.jacr.2017.08.011. Epub 2017 Oct 31. PMID: 29097048.
4. Hu, S., Laughter, M. R., & Dellavalle, R. P. (2020). Reliability of self-reported data on social media versus National Residency Match Program charting outcomes for dermatology applicants. *Journal of the American Academy of Dermatology*, 83(6), 1842-1844. <https://doi.org/10.1016/j.jaad.2020.04.052>
5. Lacey H, Price JM. #MedEd-The 'TikTok' frontier of medical education. *Clin Teach*. 2023 Oct;20(5):e13636. doi: 10.1111/tct.13636. Epub 2023 Aug 26. PMID: 37632321.

Table 1: Significant differences in self-reported online data and NRMP data.

Category	NRMP data	Online data	P-value
Step 1 score	248	254.5	p<0.001
Step 2 score	257	261.0	p=0.06
Number of abstracts, posters, and publications	20.9	23.3	p<0.01
Total publications	7	13.2	p<0.001

^aP-values calculated using Student's T-test.

Table 2: Representative quotes from categories of dermatology match discussion.

Category	Representative Quotes
Research year	“Definitely take a research year to maximize chances, of people I know who didn't match, most had not taken years.” “A research year is not necessary, there are applicants that we have ranked very highly who have had 3-5 listed publications and ones we have ranked near the bottom of the list with > 25 publications.” “Taking a research year will help you stand out, build connections, and be productive.” “This is a personal choice, however, and one that must be made after weighing the risks versus benefits. Some program directors I have spoken to do not feel an extra year of research can add much to an applicant’s curriculum vitae, while others feel it is important.” “You don't need to take one if you had research experiences during medical school, start early.”
Letters of recommendation	“Find big names in dermatology (chairs, PDs, renowned researchers, etc).” “3 dermatologists with big names, 1 from any field.” “All three were high-ranking, high-impact, quality letters. As most people will tell you, the fourth letter should come from an away rotation.” “Most applicants will have 1-2 letters from a non-derm setting (usually medicine sub-internship, research mentor) and 2-3 derm letters. Pick your letter writers carefully as some attendings can be great clinically but write lackluster letters. Big names on the letter are helpful, but not if they don't know you well enough to comment on your performance as a student or personal characteristics.”

Rotation grades	“Honor as many preclinical/clinical grades as possible; AOA is more important than GHHS but try for both.” “Honors as many rotations as you can. Do well on your dermatology elective.”
Away rotations	“If you do not have a home dermatology department do as many away rotations as possible.” “Do away rotations at programs where they often extend interview invites to interviewers.” “Away rotations are not needed if coming from a top institution.”
Interests and activities	“Try to show only interest in dermatology.” “Programs love it when you're super specialized and focused and passionate about one or two things and make that your theme of your app. You look a lot cooler and desirable vs the person who tried to do everything and anything in derm to pad their app. HAVE A FOCUS!!” “Extracurriculars aren't as big a part of the dermatology application process.”
Interview	“The most important part of the match process.”
Signals	“Do not expect to get interviews at places you do not signal.”
Personal statement	“This is not a big part of the process.” “Personal statements will not make or break your application.”
DO match	“Probably next to impossible to match if you are a DO.”
Medical school	“Try to go to a top 10 medical school if you're thinking derm.” “Go to [a medical school] with a strong home dermatology department.”

Abbreviations: PD, program director; AOA, Alpha Omega Alpha; GHHS, Golden Humanism Honors Society; DO, Doctor of Osteopathic Medicine.