MEDICAL EDUCATION

Imposter Syndrome in Dermatology

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ABSTRACT

Background: Dermatology residents may doubt their ability to become effective dermatologists. This study explores the prevalence of imposter syndrome (IS) within dermatology. Prior research in other specialties indicates that residents perceive themselves as less competent and experience higher rates of IS compared to faculty. Additionally, IS has been reported to be more common among female trainees.
Purpose: This study sought to identify imposter syndrome in the field of dermatology and at which point in their career dermatologists feel qualified. We hope that this information can inform residency training.
Methods: This cross-sectional study distributed a 12-question survey to the Association of Professors of Dermatology (APD) listserv.
Results: The survey received 264 responses. Of the respondents, 81.9% reported that they did not feel comfortable calling themselves a dermatologist until after their third year of residency. We found no significant differences in imposter syndrome based on gender or work experience in dermatology prior to residency. Current career level of respondents was a significant determinant of response. Lack of unsupervised practice prior to residency completion was the most commonly cited reason for imposter syndrome (81.2%).
Conclusion: The majority of dermatologists do not consider themselves a dermatologist until completion of residency, likely due to a lack of unsupervised practice. Providing residents with experiences to simulate unsupervised practice may reduce the prevalence of imposter syndrome.

INTRODUCTION

Professional identity formation (PIF) is the process by which trainees come to not only attain competence, but to “think, act and feel” like physicians at their respective career level.[1] Imposter syndrome (IS) is a behavioral health phenomenon described by individuals who cannot internalize this aforementioned professional identity and subsequently experience feelings of self-doubt and fear of being exposed as a fraud in their work, despite verifiable and objective evidence of their success.[2] This study investigates imposter syndrome amongst dermatologists and dermatology residents, their confidence prior to residency, and at what point in their career they felt comfortable calling themselves dermatologists.

In the realm of medical education, the process of professional identity formation plays a crucial role in shaping attitudes,

behaviors, and overall outlook of future physicians. While existing literature explores professional identity formation and imposter syndrome in medical education, particularly within the context of undergraduate medical education and various medical specialties, there is a lack of research specifically addressing these phenomena within dermatology. The available research predominantly focuses on the psychological factors that influence imposter syndrome and fails to extrapolate on underlying causative factors. There is a notable gap in the understanding of unique challenges and dynamics that residents face during dermatology training, which was found to be the most competitive specialty in the 2020 Match.[3,4] Recognizing this gap, our study aims to contribute to the existing body of knowledge by focusing specifically on factors contributing to imposter syndrome within dermatology.

This investigation delves into self-reported reasons contributing to IS, shedding light on nuanced elements that may provide opportunities for graduate medical education to mitigate the risk of IS. Via this targeted approach, this study seeks to provide valuable insight into professional identity development and imposter syndrome within dermatology, thereby offering a comprehensive understanding of the factors which influence career trajectories.

METHODS

After institutional review board exemption from Wayne State University, an anonymous Qualtrics survey (Appendix 1) was sent to academic dermatologists and residents via the Association of Professors of Dermatology (APD) email listserv. Data was collected between January 28, 2020, and February 27, 2020. To ensure accurate data analysis, pairwise deletion was used to best represent responses and account for questions without responses. Descriptive statistics were generated including means, percentages, and standard deviation for continuous variables and frequency tables for categorical variables using software (Microsoft Excel, Version 16.63.1). Mean (M) values correspond to “key values” found in **Table 1**. Significance levels were determined by Pearson $\chi 2$ statistic and two-sample *t* tests. *P* values less than 0.05 were considered significant.

RESULTS

A total of 264 APD members and dermatology residents participated in the survey. The actual response rate is unknown because the number of faculty members and residents who received the link cannot be determined. Most respondents were board certified dermatologists (73.5%), although which percent were APD members cannot be determined, with a minority of respondents still being in residency training (26.3%). Most respondents were female (59.1%) and over 5 years removed from residency (57%). Most respondents (68.7%) were not comfortable calling themselves a dermatologist until completion of dermatology residency training (**Figure 1**). Participants who were comfortable calling themselves dermatologists at the time of survey were on average 3-5 years from residency graduation. The age of respondents was 34.3% between 25-34 years old, 32.7% between 35-44 years old, 12.1% between 45-54 years old, and 22.2% 55 or older. All responses are presented in **Table 1**.

There was significant correlation between self-described competitiveness of application when applying to dermatology residency and level of confidence in matching dermatology

Table 1. Survey Questions and Responses.

Question	Response (key value)	N
Question 1: Current Age		248
	18 - 24 (1)	0
	25 - 34 (2)	112
	35 - 44 (3)	81
	45 - 54 (4)	0
	55 - or older (5)	55
Question 2: Gender		247
	Female (1)	146
	Male (2)	101
	Transgender (3)	0
Question 3: Current Career Level		247
	Dermatology 1st year (1)	32
	Dermatology 2nd year (2)	15
	Dermatology 3rd year (3)	18
	<1 year from residency graduation (4)	7
	1-2 years from residency graduation (5)	9
	2-3 years from residency graduation (6)	10
	3-4 years from residency graduation (7)	8
	4-5 years from residency graduation (8)	7
	5+ years from residency graduation (9)	141
Question 4: Marital Status		246
	Married (1)	207
	Widowed (2)	0
	Divorced (3)	5
	Separtated (4)	1
	Never married (5)	33
Question 5: Children		244
	Yes (1)	168
	Adopted (2)	3
	No (3)	73
Question 6: "Did you match the first time"		245
	Yes (1)	212
	No (2)	33
Question 7: "Comfortable calling oneself a dermatologist"		246
	Yes (1)	211
	No (2)	35

Question 8: At what point did you feel comfortable calling yourself a dermatologist		144
	Prior to Dermatology Training (1)	2
	PGY-1 (2)	8
	PGY-2 (3)	16
	PGY-3 (4)	19
	Residency Completion (5)	49
	1 year post residency (6)	28
	2 years post residency (7)	11
	3 years post residency (8)	5
	4 years post residency (9)	2
	5 years post residency (10)	3
	>5 years post residency (11)	1
Question 9: What caused a delay		399
	Diagnosis (1)	74
	Treatment/Management (2)	76
	Patient Counseling (3)	31
	Surgical Skills (4)	34
	Cosmetic Procedure Skills (5)	37
	Experience with Unsupervised Practice (6)	108
	Other (7)	39
Question 10: Practice prior to dermatology training		222
	Yes (1)	13
	No (2)	209
Question 11: Chances of matching during first application		219
	Certain I would match (1)	44
	More likely than not that I would match (2)	104
	Equal chances of matching or not (3)	55
	Unlikely to match (4)	14
	Very unlikely to match (5)	2
Question 12: Strength of application		221
	Very Competitive (1)	75
	Competitive (2)	85
	Somewhat Competitive (3)	50
	Noncompetitive (4)	11

* Data for Question 9 was analyzed only for those that answered all questions.

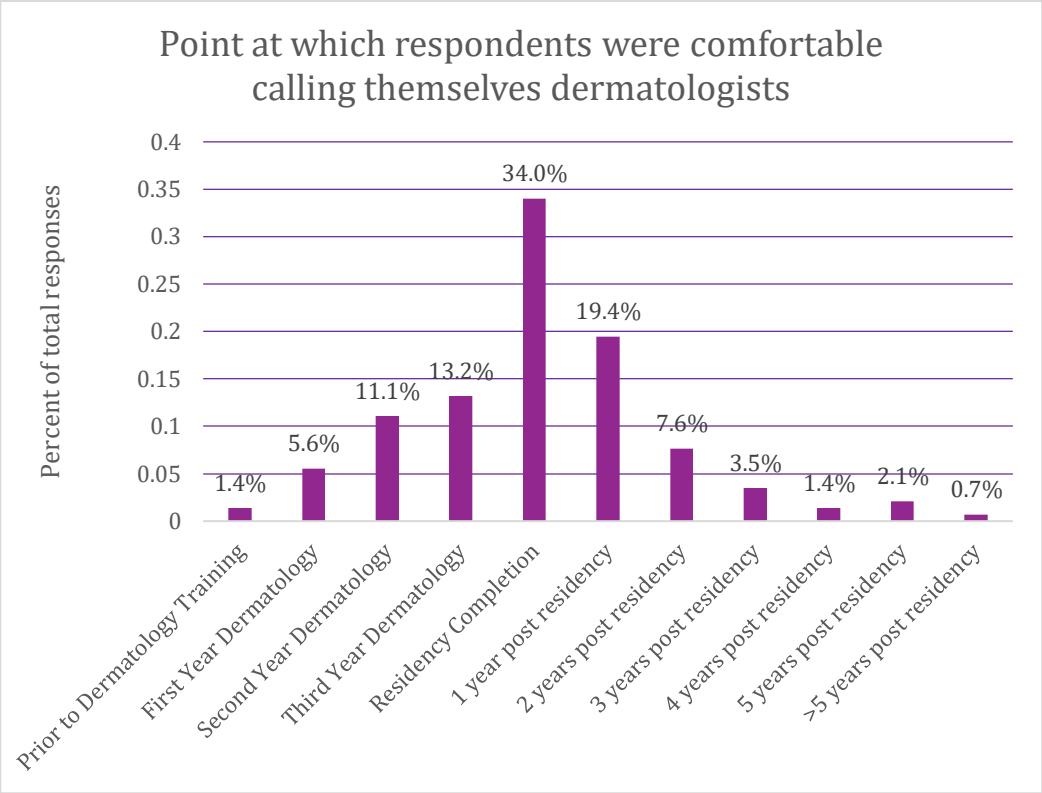

Figure 1. Point at which respondents felt comfortable calling themselves a dermatologist.

(*r*=0.67, *p*<0.001), though neither was significantly associated with comfort calling oneself a dermatologist.

The study found no significant difference in the point at which participants felt comfortable calling themselves a dermatologist when comparing respondents who worked in dermatology prior to dermatology residency (Mean (*M)*= 5.13, Standard Deviation (*SD)*= 2.98) to those without prior training (*M*= 5.07, *SD*= 3.15) (*t*(8) = -0.081, *p* > 0.5). There was no significant difference in prevalence of IS between the male and female respondents (*t*(119) = 0.363, *p* > 0.5).

For those that felt comfortable calling themselves a dermatologist at the time of the survey, the common reasons for delay in calling oneself a dermatologist were lack of experience with unsupervised practice (81.2%), lack of confidence in treatment/management (57.1%), and lack of confidence making a diagnosis (55.6%) (**Figure 2**). Patient counseling, surgical skills, and cosmetic procedures were cited less frequently (23.3%, 25.6%, and 27.8%, respectively). Those that felt comfortable calling themselves a dermatologist at the time of survey had significantly more years of career experience (*M*= 7.41, *SD*= 2.60), than those that did not feel comfortable calling themselves a dermatologist at the time of survey (*M*= 1.80, *SD*= 1.51) (*t*(73) = 17.998 *p* < 0.001).

DISCUSSION

This study of imposter syndrome in dermatology found a significant association between career level and comfort in calling oneself a dermatologist. The study found no significant differences in IS between male and female participants. Our study also found

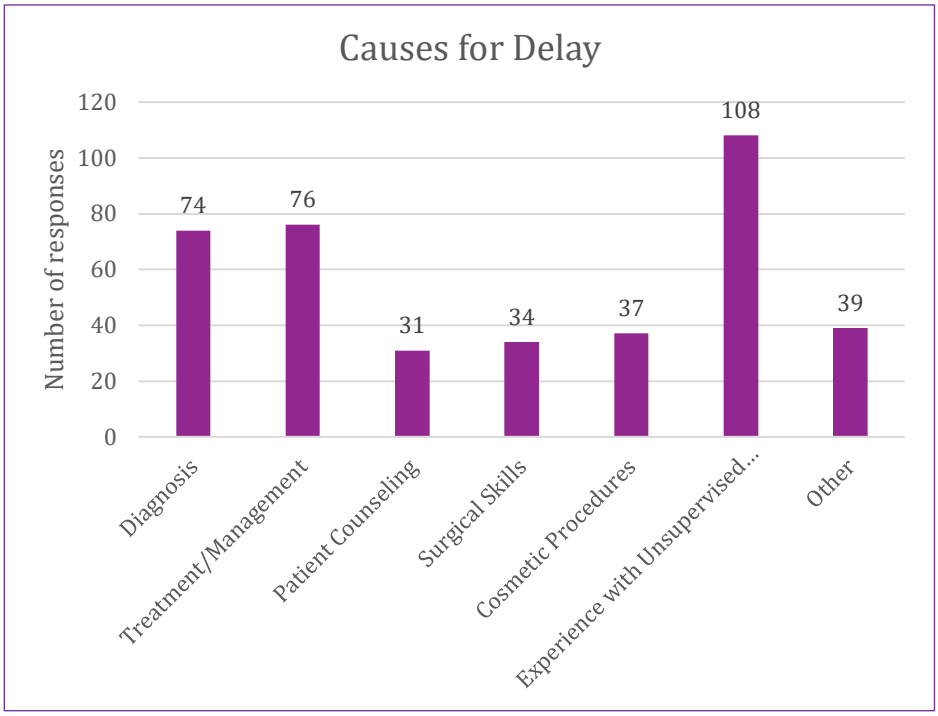

Figure 2. Reasons for delay in comfort calling oneself a dermatologist.

that 81% of respondents selected lack of "experience with unsupervised practice" as a cause for delay in comfort calling themselves a dermatologist.

Previous research has shown higher rates of IS in female medical students, as compared to their male counterparts.[5] There was also evidence of a similar finding amongst surgical residents, showing higher prevalence of IS in female residents.[6] We found no significant difference in rates of IS between genders in dermatology. This could indicate that female physicians today may experience less conflict in their professional identity than in years past, perhaps due to the growing acknowledgment of the necessity for gender diversity and the expanding array of opportunities for women.[7] Furthermore, the increasing representation of women in dermatology, with more than 53% of all dermatology residents being female, may contribute to a more inclusive and supportive environment, potentially mitigating feelings of imposter syndrome, while simultaneously fostering a greater sense of professional identity amongst female dermatologists.[8]

In our study, 81% of the respondents cited lack of "experience with unsupervised practice" as a reason for hesitancy in calling themselves dermatologist. This uncertainty may stem from a lack in confidence in their ability to care for patients without the oversight of an attending to correct mistakes. This is consistent with data from a previous study that found residents do not believe they will be ready to practice alone following graduation.[9] Moreover, research involving fellows has underscored the significance of this issue.[10] This emphasizes the need for medical training programs to address this uncertainty by providing opportunities for residents to gain experience with less supervision to simulate unsupervised practice and build their confidence in their own abilities.

There was a correlation between self-described competitiveness of one's

application and certainty that they would match in dermatology. Of respondents, 67.6% felt “certain” or “more likely than not” that they would match. This confident self-perception likely stems from academic achievements, research experience, and other factors that applicants believe make them competitive applicants. The data supports the notion that respondents felt they earned their spot in residency, but this did not confer a lower risk of imposter syndrome during residency. The competitive environment of dermatology residency program, coupled with high expectations placed on residents, could exacerbate feelings of inadequacy and imposter syndrome in even the most confident applicants.

Limitations include small sample size and social desirability bias due to self-reporting of “competitiveness.” Because the study predominantly focused on early career, recall bias may be present.

CONCLUSION

In dermatology, most physicians experience imposter syndrome prior to graduation, regardless of gender. The most common reason cited for feelings of imposter syndrome was lack of experience with unsupervised practice. To address this, training programs may be able to provide experiences simulating unsupervised practice.

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