

mental health burden of homeless US adults is 46%, which is greater than the national average of 18.5% for the general US population.^{4,5} The correlations between mental health diagnoses and likelihood of following up points to the compounded difficulty of patient adherence when grappling with psychiatric disease.

Although this study has several limitations, including limited sample size, EHR accuracy, and generalizability to the US homeless population, our results aim to better inform dermatology clinicians on the management of this unique and vulnerable population. Future studies should characterize barriers to dermatologic care for homeless persons to develop effective interventions and treatment strategies.

Amanda Truong, BS,^{a,b,c} Caroline W. Laggis, MD,^a Trevor D. Annis, BS,^a Aaron M. Secrest, MD, PhD,^{a,d} Nora F. Fino, MS,^e Douglas L. Powell, MD,^{a,f} Laura J. Gardner, MD, MS,^a Tiffany Gregory, PA-C,^f Christopher M. Hull, MD,^{a,f} and Bethany K. H. Lewis, MD, MPH^{a,f}

From the Department of Dermatology,^a Department of Oncological Sciences,^b Huntsman Cancer Institute,^c Department of Population Health Sciences,^d and Division of Epidemiology, University of Utah^e; and Fourth Street Clinic, Salt Lake City, UT^f

Funding sources: Dr Secrest is funded by the University of Utah Vice President's Clinical Translational Research Scholars and the Dermatology Foundation. Ms Truong is supported by National Institutes of Health grants 5T32HD007491-22 (former) and F30CA235964 (current).

Conflicts of interest: None disclosed.

IRB approval status: Granted exemption by the University of Utah IRB (00096567).

Reprints not available from the authors.

Correspondence to: Bethany K.H. Lewis, MD, MPH, University of Utah Department of Dermatology, 30 N 1900 E 4A330 SOM, Salt Lake City, UT 84132

E-mail: bethany.lewis@bsc.utah.edu

REFERENCES

1. Montgomery AE, Szymkowiak D, Marcus J, Howard P, Culhane DP. Homelessness, unsheltered status, and risk factors for mortality: findings from the 100,000 homes campaign. *Public Health Rep.* 2016;131(6):765-772.

2. Stratigos AJ, Stern R, Gonzalez E, Johnson RA, O'Connell J, Dover JS. Prevalence of skin disease in a cohort of shelter-based homeless men. *J Am Acad Dermatol.* 1999;41(2 Pt 1):197-202.
3. Chen CL, Fitzpatrick L, Kamel H. Who uses the emergency department for dermatologic care? A statewide analysis. *J Am Acad Dermatol.* 2014;71(2):308-313.
4. National Institutes of Health. Mental illness. Available: <https://www.nimh.nih.gov/health/statistics/mental-illness.shtml>; 2019. Accessed April 22, 2019.
5. US Department of Housing and Urban Development. The 2010 annual homeless assessment report to Congress. Available: <https://www.hudexchange.info/resources/documents/2010HomelessAssessmentReport.pdf>; 2010. Accessed April 22, 2019.

<https://doi.org/10.1016/j.jaad.2019.09.078>

Impostor syndrome in United States dermatology residents



To the Editor: Psychologists first described impostor syndrome (IS) in 1978 in women who, despite having outstanding academic and professional accomplishments, experienced persistent feelings of self-doubt and were skeptical of their success.¹ People with characteristics of IS fear being exposed as frauds and doubt their talent and ability. IS has been recognized in the business and entertainment industries but is less studied in medicine. Studies involving medical students and primary care residents have linked IS to burnout and psychiatric comorbidities.^{2,3} The prevalence of IS in dermatology residents is currently unknown but may be significant given the competitive nature of obtaining a residency position and the stressors of residency training. The objective of this study was to define the prevalence of IS in United States dermatology residents and to determine a possible association with physician burnout.

A cross-sectional survey study was conducted from May to June 2019. The survey was developed and managed in REDCap (Research Electronic Data Capture), a secure Web-based tool to capture electronic data for research. The survey included the Clance Impostor Phenomenon Scale (CIPS)⁴ and the Maslach Burnout Inventory Human Services Survey for Medical Personnel (MBI-HSS [MP]),⁵ as well as demographic characteristics, training year, and perceived program rank. A link to the anonymous survey was sent via LISTSERV (L-Soft International, Inc, Bethesda, MD) to members of the Association of Professors of Dermatology with a request to forward to residents. Data analysis, including Pearson correlations, Fisher exact test, regression, and descriptive statistics, was conducted in June 2019 using SAS 9.4 software (SAS Institute Inc, Cary, SC).

Table I. Demographic characteristics of 121 dermatology residents along with a comparison of those with and without impostor syndrome (IS)

Variable	Total sample	Respondents with IS	Respondents without IS	P value
Age, mean (SD), y	31.2 (4.4)	30.8 (2.7)	34.2 (10.7)	.0396*
Sex, No. (%)				.4674
Male	47 (39)	40 (85)	7 (15)	
Female	72 (60)	66 (92)	6 (8)	
Decline to answer	2 (1)	2 (100)	0 (0)	
Ethnicity, No. (%)				.8682
Non-Hispanic	113 (93)	101 (89)	12 (11)	
Hispanic	8 (7)	7 (88)	1 (12)	
Race, No. (%)				.7861
White/Caucasian	86 (71)	75 (87)	11 (13)	
Asian	18 (15)	17 (95)	1 (15)	
Black/African American	8 (7)	7 (88)	1 (12)	
Other	9 (7)	9 (100)	0 (0)	
Year in training, No. (%)				.016*
1st-year dermatology resident	42 (34)	38 (90)	4 (10)	
2nd-year dermatology resident	43 (36)	42 (98)	1 (2)	
3rd-year dermatology resident	36 (30)	28 (78)	8 (22)	
Perceived national rank of residency program, No. (%)				.3571
Top 25%	77 (64)	66 (86)	11 (14)	
Middle 50%	38 (31)	36 (95)	2 (5)	
Bottom 25%	6 (5)	6 (100)	0 (0)	

No., Number; SD, standard deviation.

*Statistically significant ($P < .05$).

Table II. Impostor syndrome (IS) and burnout scores

Variable	Mean (SD)	Min, max	Frequency with IS, No. (%)	Frequency without IS, No. (%)
IS score: CIPS*	63.13 (17.3)	26, 100	108 (89)	13 (11)
Burnout score: MBI-HSS (MP) [†]			Frequency with burnout, No. (%)	Frequency without burnout, No. (%)
Emotional exhaustion	23.3 (11.7)	0, 50	49 (40)	72 (60)
Depersonalization	9.4 (6.2)	0, 27	54 (45)	67 (55)
Personal accomplishment	39.7 (5.8)	22, 48	18 (15)	103 (85)
Correlation between IS and burnout scores	Pearson coefficient (r)	P value		
Emotional exhaustion	0.4100	<.0001 [‡]		
Depersonalization	0.3126	.0005 [‡]		
Personal accomplishment	-0.3355	.0002 [‡]		

CIPS, Clance Impostor Phenomenon Scale; max, maximum; MBI-HSS (MP), Maslach Burnout Inventory Human Services Survey for Medical Personnel; Min, minimum; No., number; SD, standard deviation.

*For the CIPS, a score of ≤ 40 indicated few impostor characteristics, 41-60 indicated moderate impostor experiences, 61-80 indicated frequent impostor feelings, and > 80 indicated intense impostor experiences. Respondents with a score of > 40 were considered to have impostor syndrome.

[†]For the MBI-HSS (MP), the following scores indicated burnout: Emotional Exhaustion ≥ 27 , Depersonalization ≥ 10 , and Personal Accomplishment ≤ 33 . Respondents with a score indicating burnout in at least 1 of the 3 categories were considered to have burnout.

[‡]Statistically significant ($P < .05$).

Of the 200 residents who initiated the survey, 121 residents completed it (Table I). The actual response rate is unknown because what number of residents received the link cannot be determined. Overall, 89% of respondents ($n = 108$) had IS with moderate to intense impostor tendencies.

IS was slightly more frequent in women compared with men (92% vs 85%) and occurred in 98% of second-year dermatology residents (Table I). Also, 56% ($n = 68$) of respondents had burnout in at least 1 of the 3 MBI-HSS (MP) categories. The odds of burnout for those with IS was 19.61 ($P < .005$).

IS had a moderate positive correlation with Emotional Exhaustion ($r = 0.4100$, $P < .0001$) and Depersonalization ($r = 0.3126$, $P = .0005$), and a moderate negative correlation with Personal Accomplishment ($r = -0.3355$, $P = .0002$) (Table II).

This study has some limitations. The results may not be generalizable because approximately 10% of United States dermatology residents participated, and response bias may have contributed to our findings. This was a cross-sectional study, so we cannot determine causation or progression of these psychologic phenomena over time.

IS represented a significant concern among respondents. IS may underlie psychologic distress among residents and prevent them from seeking new or challenging opportunities due to lack of confidence or perceived competence. Strategies to address IS, such as a space to share and normalize common struggles with peers, strong professional mentorship, and feedback that acknowledges efforts and accomplishments, could be developed to help residents deal with feelings of self-doubt. This may contribute to improved well-being in dermatology residents.

Paul A. Regan, BS,^a Cassidy Shumaker, MPH,^b and
Joslyn S. Kirby, MD, MEd, MS^b

From the Penn State College of Medicine^a and the
Department of Dermatology, Penn State Health
Milton S. Hershey Medical Center, Hershey,
Pennsylvania.^b

Funding sources: Use of REDCap through Penn State is supported by National Institutes of Health/National Center for Advancing Translational Sciences Grant Numbers UL1-TR-000127 and UL1-TR-002014 through The Penn State Clinical & Translational Research Institute, Pennsylvania State University.

Conflicts of interest: None disclosed.

This research was presented as an abstract at the Dermatology Teachers Exchange Group of the Association of Professors of Dermatology Annual Meeting, Chicago, Illinois, September 13-14, 2019.

IRB approval: The Penn State Institutional Review Board (STUDY00012452) approved this study.

Reprint requests: Paul A. Regan, BS, Penn State College of Medicine, Penn State Health Milton S. Hershey Medical Center, 500 University Dr HU14, Hershey, PA, 17033

E-mail: pregan@pennstatehealth.psu.edu

REFERENCES

1. Imes S, Clance PR. The imposter phenomenon in high achieving women: dynamics and therapeutic intervention. *Psychother Theor Res Pract.* 1978;15(3):241-247.
2. Villwock JA, Sobin LB, Koester LA, Harris TM. Impostor syndrome and burnout among American medical students: a pilot study. *Int J Med Educ.* 2016;7:364-369.
3. Legassie J, Zibrowski EM, Goldszmidt MA. Measuring resident well-being: impostorism and burnout syndrome in residency. *J Gen Intern Med.* 2008;23:1090-1094.
4. Chrisman SM, Pieper WA, Clance PR, Holland CL, Glickauf-Hughes C. Validation of the Clance Impostor Phenomenon Scale. *J Pers Assess.* 1995;65(3):456-467.
5. Maslach C, Jackson SE, Leiter MP. *Maslach Burnout Inventory Manual.* 4th ed. Menlo Park, CA: Mind Garden, Inc; 2018.

<https://doi.org/10.1016/j.jaad.2019.10.018>

Income inequality between male and female clinical faculty at public academic dermatology departments



To the Editor: Over the past few decades, gender inequality has become an increasing concern in academic medicine.^{1,2} A large study recently conducted by Jena et al³ used publicly accessible databases to evaluate salaries of physicians employed by United States public medical institutions. Even after adjusting for numerous variables, female physicians were compensated \$19,878 (8.0%) less than their male counterparts. Using a similar model, we sought to quantify the difference between salaries of male and female dermatologists at public medical institutions.

Every public medical institution within a state subject to Freedom of Information laws was studied. We identified 26 public academic medical institutions, and publicly available salary databases were used to ascertain the salary of each dermatologist listed on the departmental website. Hospital websites were used to record demographic data, including sex, subspecialty (Mohs micrographic surgeon, dermatopathologist, and pediatric dermatologist), faculty rank, and departmental leadership role (chair, vice chair, and program director). To limit the effect of any part-time faculty members, only those with annual salaries exceeding \$175,000 were included in the study. Submitted Medicare charges and standardized Medicare payments were recorded using data published by the Centers for Medicare and Medicaid Services.⁴ National Institutes of Health grant funding was determined by faculty members listed as primary investigators on the National