doi:10.36849/JDD.6903

Barriers to Care-Seeking and Treatment Adherence Among Dermatology Patients: A Cross-Sectional National Survey Study

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This study was performed with approval from The George Washington University Institutional Review Board (IRB protocol # NCR191748).

INTRODUCTION

Disparities and inequities exist in dermatological access and outcomes, associated with demographics such as socioeconomic status (SES) and geography.[1,2] Some studies have documented barriers to care and treatment adherence in dermatology such as financial and insurance challenges, logistical considerations, and sociocultural beliefs.[1-3] There remains a need for further data on dermatology patient experiences in accessing care and treatment adherence. This study sought to evaluate the prevalence of and reasons for care avoidance and nonadherence.

An 11-question national cross-sectional survey study was disseminated in March 2021 to a random sample of 1595 out of 2.5 million Americans in the SurveyMonkey® Contribute and Rewards Panel (San Mateo, CA). The survey was piloted by Venkatesh et al in the George Washington University Medical Faculty Associates Dermatology Department.[4] Of 1595 surveyed, 1525 completed the survey (96.3% response rate). One screening question was used: "Have you ever seen a dermatologist?" Of 1525 completed survey submissions, 1130 (74.1%) had seen a dermatologist before and continued to complete the survey. Of these participants, 9 were under 18 years and excluded, resulting in 1121 submissions for further analysis. Multivariate logistic models were used to calculate the adjusted odds ratio (aOR) and 95% confidence intervals (CI) of demographic variables. All analyses were performed using R (R Foundation for Statistical Computing, Vienna, Austria).

The demographic distribution of participants is shown in Table 1. More participants had private insurance, higher education, and higher SES than the general population. Of 1121 participants, 51.8% reported delaying or avoiding seeing a dermatologist about skin, hair, or nail problem. Common reasons for care avoidance included "Health insurance and/or financial challenges" (42.9%), "Logistical challenges (eg, long wait times, transportation, childcare, etc.)" (33.9%), "I felt safe/healthy and/or had no symptoms" (23.9%), and "Distrust of physician" (16.0%). Demographics associated with higher care avoidance included younger age, female gender, $15,000–29,999 income range, and Medicare-insured (Table 2).

Additionally, of 1121 participants, 22.7% of patients reported nonadherence with dermatologist treatment recommendations. The most common reasons were side effects and adverse events (27.9%), expensive treatment cost (24.0%), treatment plan complexity and forgetfulness (14.7%), patient-provider disagreement or distrust (13.2%), and perceived lack of medication efficacy (9.3%). Demographics associated with higher nonadherence included younger age, lower income ranges, and Medicare-insured (Table 2).

Our study found that a majority (51.8%) of participants avoided or delayed dermatology care, larger than general healthcare estimates (20%–30%).[5] Additionally, a significant minority (22.7%) of participants reported treatment nonadherence, lower than previous dermatology nonadherence estimates (34-45%).[6]

Financial and insurance challenges were the most commonly cited barrier to care (42.9%), and expensive treatment cost was the second most common barrier to adherence (24.0%). Correspondingly, patients with income of $15,000–29,999 and Medicare insurance had higher odds of care avoidance and nonadherence. Indeed, one national study found only 29.8% of surveyed dermatologists accepted public insurance and privately insured patients had shorter appointment wait times.[8] Logistical challenges (33.9%) were also a significant barrier to care. Strategies to overcome financial and logistical barriers include teledermatology, accurate cost prediction, and facilitated access to safety net providers.[3]

Distrust was another significant reason for care avoidance (16.0%) and nonadherence (13.3%). Dermatologists should

TABLE 1.

Demographics of 1121 Dermatology Patients Across the United States			
Variable		**Frequency**	**Percent (%)**
Age	18–24	142	12.7
	25–34	222	19.8
	35–44	159	14.2
	45–54	287	25.6
	55–64	196	17.5
	65+	115	10.3
Education level	Associate degree	142	12.7
	Bachelor's degree	356	31.8
	Doctoral or professional degree	54	4.8
	High school diploma or equivalent	202	18.0
	Less than high school diploma	19	1.7
	Master's degree	146	13.0
	Technical training or some of college	202	18.0
Gender	Female	636	56.7
	Male	459	40.9
	Non-binary	13	1.1
	Prefer not to answer	13	1.1
Employment status	Employed full time (≥40 hours/week)	533	47.5
	Employed part time (<40 hours/week)	157	14.0
	Other: please specify	14	1.2
	Retired	145	12.9
	Self-employed	60	5.4
	Student	50	4.5
	Unable to work	55	4.9
	Unemployed and currently looking for work	62	5.5
	Unemployed and not currently looking for work	45	4.0
Income	$100,000–$150,000	165	14.7
	$15,000–$29,999	145	12.9
	$30,000–$49,999	182	16.2
	$50,000–$74,999	228	20.3
	$75,000–$99,999	198	17.7
	≥$150,000	116	10.3
	≤$15,000	87	7.8
Insurance status	Medicaid	136	12.1
	Medicare	240	21.4
	Private	651	58.1
	Self-pay	52	4.6
	Uninsured	42	3.7
Region	Midwest	205	18.3
	Northeast	296	26.4
	Other (please specify)	17	1.5
	Southeast	292	26.0
	Southwest	123	11.0
	West	188	16.8

TABLE 2.

Logistic Regression Models of Care Avoidance and Treatment Nonadherence by Demographic			
Variable [Reference]		Care Avoidance	Treatment Nonadherence
		aOR (95% CI)	aOR (95% CI)
Intercept		0.76 (0.31–1.85)	0.17 (0.05–0.52)
Age [65+ y]	18–24	2.27 (1.14-4.54)	3.50 (1.45–8.43)
	25–34	2.84 (1.52–5.31)	4.60 (2.02–10.47)
	35–44	1.73 (0.91–3.28)	2.39 (1.02–5.59)
	45–54	1.78 (0.97–3.25)	1.41 (0.62–3.23)
	55–64	1.61 (0.90–2.87)	0.96 (0.42–2.20)
Education level [Doctoral or professional degree]	Less than high school diploma	0.42 (0.12–1.50)	1.20 (0.32–4.56)
	High school diploma or equivalent	1.00 (0.52–1.94)	0.53 (0.24–1.16)
	Technical training or some of college	0.94 (0.49–1.80)	0.63 (0.30–1.36)
	Associate's degree	1.03 (0.53–2.02)	0.50 (0.23–1.11)
	Bachelor's degree	1.05 (0.57–1.93)	0.43 (0.21–0.89)
	Master's degree	0.84 (0.44–1.63)	0.70 (0.32–1.51)
Gender [Female]	Male	0.68 (0.52–0.88)	0.81 (0.59–1.12)
	Non-binary	3.08 (0.63–15.07)	4.78 (1.14–20.01)
Employment status [Employed Full Time]	Self-employed	1.01 (0.57–1.79)	1.61 (0.82–3.14)
	Employed part time (< 40 hours/week)	0.82 (0.54–1.23)	0.76 (0.47–1.24)
	Student	0.48 (0.24–0.95)	0.62 (0.28–1.36)
	Retired	0.41 (0.24–0.69)	0.47 (0.21–1.04)
	Unable to work	0.61 (0.32–1.17)	0.59 (0.27–1.30)
	Unemployed and currently looking for work	1.10 (0.61–1.98)	1.17 (0.60–2.28)
	Unemployed and not currently looking for work	0.84 (0.44–1.60)	0.59 (0.25–1.41)
Income [≥$150,000]	≤$15,000	1.14 (0.58–2.25)	2.24 (0.96–5.24)
	$15,000–$29,999	1.82 (1.02–3.24)	2.61 (1.23–5.53)
	$30,000–$49,999	0.92 (0.55–1.54)	1.49 (0.73–3.05)
	$50,000–$74,999	1.04 (0.63–1.70)	1.79 (0.91–3.53)
	$75,000–$99,999	1.49 (0.91–2.44)	2.14 (1.10–4.17)
	$100,000–$150,000	1.02 (0.62–1.69)	1.03 (0.50–2.14)
Insurance status [Private]	Medicaid	1.22 (0.78–1.91)	1.20 (0.71–2.01)
	Medicare	1.53 (1.03–2.26)	2.05 (1.33–3.17)
	Self-pay	1.04 (0.56–1.92)	1.50 (0.74–3.03)
	Uninsured	0.82 (0.42–1.61)	0.56 (0.22–1.43)
Region [Midwest]	Northeast	0.77 (0.53–1.13)	0.78 (0.50–1.24)
	Southeast	0.76 (0.52–1.12)	0.95 (0.60–1.50)
	Southwest	0.75 (0.46–1.21)	0.89 (0.49–1.60)
	West	0.96 (0.63–1.47)	0.75 (0.44–1.26)

prioritize awareness of patient background, cultural humility, and continuous feedback. Dermatologists and primary care providers should also facilitate health literacy, emphasizing the need for timely care and treatment adherence.[7] Given that side effects and adverse events (27.9%), as well as treatment complexity and forgetfulness (14.7%), were common barriers to adherence, dermatologists should address safety profiles and facilitate adherence via frequent check-ins and adherence strategies (eg, adherence app).

Regarding limitations, this study was prone to sampling biases intrinsic to survey study design. However, SurveyMonkey ensures a well-validated random sampling of representative US participants. Additionally, our participants were of higher SES and education level than the US population but were similar to other large national dermatology studies.[3] Moreover, race/ethnicity comparisons were not possible in this study as the authors decided to exclude race as a variable given its potential for over-generalization and lack of scientific validity. Finally,

response bias regarding negative health behaviors may have resulted in underreporting of care avoidance and nonadherence. Nevertheless, this study, the largest of its kind, highlights the high prevalence, common barriers, and risk factors of care avoidance and nonadherence in dermatology.

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