

A Multi-Site Survey Study of Patient Satisfaction with Teledermatology

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ABSTRACT

Introduction. Telemedicine has been of heightened focus due to spikes in usage during the COVID-19 pandemic. Disparities in health care may affect patient satisfaction with this resource depending on factors such as patient race, age, or socioeconomic background. The purpose of this study was to analyze patient satisfaction with teledermatology to identify any differences in satisfaction based on race, age, and income during the COVID-19 pandemic period.

Methods. A 21-question, IRB-approved survey was administered to patients at two academic dermatology clinics in Kansas City. Patient satisfaction was measured using a five-point Likert scale.

Results. A total of 64 completed surveys were analyzed (17.8% response rate). Most of the participants were female (n = 48, 75%), age 45 to 60 (n = 17, 26.6%), and reported White for race (n = 55, 85.9%). Overall, 73.4% (n = 47) of patients reported being satisfied with their visit. However, only 38.7% (n = 24) of participants were likely to choose a video over an in-person visit. Reasons for low patient satisfaction included concerns regarding ability to perform an accurate physical exam with a video visit (n = 9, 14.1%), receiving inadequate care (n = 4, 6.3%), protected privacy (n = 3, 4.7%), and provider understanding the patient (n = 2, 3.1%).

Conclusions. Our findings were similar to prior studies stating no difference in patient satisfaction with regards to age, income, or race and patients reporting high satisfaction with teledermatology appointments despite a preference for in-person dermatology visits. Future studies with a larger diverse cohort of participants are needed to elucidate and address possible disparities associated with teledermatology use.

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INTRODUCTION

Telemedicine has been of heightened focus due to spikes in usage during the COVID-19 pandemic.¹ Benefits of teledermatology for patients included increased access to care, lower costs, and decreased risk of viral transmission from direct physical contact. Disadvantages of this technology included issues with application connectivity, dependency on user technological capability, and barriers limiting accessibility to technological devices. Moreover, disparities in healthcare may affect patient satisfaction with this resource depending on factors such as

patient race, age, or socioeconomic background. The purpose of this study was to analyze patient satisfaction with teledermatology to identify any differences in satisfaction based on race, age, and income during the COVID-19 pandemic period.

METHODS

A 21-question, IRB-approved survey (see Appendix) was administered to patients at two academic dermatology clinics in Kansas City. Both dermatology clinics used the synchronous (live interactive) method of teledermatology. The survey was distributed in person at one site due to technological limitations that prevented query for patients with teledermatology appointments in the specified time period and dissemination through email. The survey period was between March and July of 2021 with patients having a teledermatology appointment after March 2020. This was chosen as it was one year following the implementation of local city-wide closures to reduce viral transmission during the COVID-19 pandemic.

Patient satisfaction was measured using a five-point Likert scale ranging from highly dissatisfied (score = 1) to highly satisfied (score = 5) and condensed for analysis into a satisfied group (highly satisfied and satisfied), neutral group, and dissatisfied group (dissatisfied and highly dissatisfied). For statistical analysis, Mann Whitney U was performed, and patients were dichotomized into two groups for age, income, and race that would yield relatively equal comparison numbers.

RESULTS

A total of 64 completed surveys were analyzed (17.8% response rate). Most of the participants were female (n = 48, 75%), between the ages of 45 and 60 (n = 17, 26.6%), and reported White for race (n = 55, 85.9%). Both clinical sites had similar demographic characteristics (Table 1). Overall, 73.4% (n = 47) of patients reported being satisfied with their visit. However, only 38.7% (n = 24) of participants were likely to choose a video over an in-person visit (Table 2).

Nine (14.1%) participants reported concern regarding the ability to perform an accurate physical exam with a video visit in the comments section of the survey. Other reasons for low patient satisfaction with teledermatology visits included concerns regarding receiving inadequate care (n = 4, 6.3%), protected privacy (n = 3, 4.7%), and provider understanding the patient (n = 2, 3.1%). There were no statistical differences in patient satisfaction for age (p = 0.273), income (p = 0.431), or race (p = 0.071; Table 2).

DISCUSSION

Our findings were similar to prior studies stating no difference in patient satisfaction with regards to age, income, or race and patients reporting high satisfaction with teledermatology appointments despite a preference for in-person dermatology visits.^{2,3} Limitations included the small sample size of relatively homogenous race and age. Additionally, there was possible selection bias due to patients with higher technological capabilities being more likely to have teledermatology appointments and able to complete the survey.² Future studies evaluating patient satisfaction with a larger group of participants of diverse races, socioeconomic statuses, and ages are needed to elucidate and address possible disparities associated with teledermatology use.

Table 1. Patient demographics.

Demographic Characteristic (64 respondents)	Site 1 (n = 34)		Site 2 (n = 30)		Overall	
	N	%	N	%	N	%
Gender						
Female	26	76.5	22	73.3	48	75
Male	8	23.5	8	26.7	16	25
Age						
18 - 29 years	5	14.7	2	6.7	7	10.9
30 - 45 years	5	14.7	8	26.7	13	20.3
45 - 60 years	11	32.4	6	20.0	17	26.6
61 - 75 years	10	29.4	12	40.0	22	34.4
76 years or above	3	8.8	2	6.7	5	7.8
Race*						
Black or African American	5	14.7	0	0	5	7.8
Native American	1	2.9	0	0	1	1.6
White	26	76.5	29	96.7	55	85.9
Other	1	2.9	1	3.3	2	3.1
Total Annual Household Income*						
Below \$20,000	8	23.5	2	6.7	10	15.6
\$20,000 to \$39,999	4	11.8	1	3.3	5	7.8
\$40,000 to \$59,999	8	23.5	6	20.0	14	21.9
\$60,000 to \$79,999	5	14.7	2	6.7	7	10.9
\$80,000 and above	7	20.6	15	50	22	34.4

*Not all participants answered.

Table 2. Factors associated with satisfaction of teledermatology.

	Overall Satisfaction	Quality of Video Visits	Choosing Video Visit Over In-person Visit	Understood What Provider Said	Provider Heard and Understood Patient	Had the Opportunity to Ask Questions	Felt Privacy Was Respected	Skin Condition Will Be Taken Care of
Satisfied/Agree/Likely (n)	73.4% (47)	78.1% (50)	38.7% (24)	95.2% (60)	92.2% (59)	95.2% (60)	92.2% (59)	76.2% (48)
Dissatisfied/Disagree/Unlikely (n)	9.4% (6)	3.1% (2)	46.8% (29)	0	3.1% (2)	0	4.7% (3)	6.3% (4)
Neutral (n)	17.2% (11)	18.8% (12)	12.9% (8)	4.8% (3)	4.7% (3)	4.8% (3)	3.1% (2)	17.5% (11)
p Value for Age Difference	0.273	0.286	0.801	0.786	0.773	0.332	0.417	0.377
p Value for Income Difference	0.431	0.276	0.966	0.72	0.188	0.246	0.273	0.349
p Value for Race Difference	0.071	0.236	0.074	0.316	0.787	0.884	0.274	0.706

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Keywords: telemedicine, community health, dermatology, patient satisfaction

APPENDIX

Survey Tool

1. Have you filled out this survey before?
2. Age
3. Sex
4. Race
5. What is your annual household income?
6. What is your zip code?
7. How many telederm (video visits) have you had since March 24, 2020?
8. Please rate your satisfaction with your video visits.
9. How likely are you to choose a video visit over an in-person visit?
10. How would you rate the quality of the video? Please answer the following statements according to your experience.
11. I understood what my provider told me on the video.
12. My provider heard and understood me.
13. I had the opportunity to ask questions.
14. I felt my privacy was respected.
15. My skin condition is or will be well taken care of.
16. How would you rate your ability to understand and use technology?
17. What device did you use for your appointment?
18. Is the device your own?
19. Did you have any issues with connectivity, screen lag, or interruption of signal?
20. Did you receive any instruction, educational handouts/material, or website links at the end of your visit?
21. Do you have any suggestions for how to improve the video visit experience?