

## Empathetic Communication in Telemedicine: A Pilot Study

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### Abstract

**Background and Objectives:** In health care, empathy is a clinician's ability to understand a patient's emotional state and convey that understanding in their care; and being culturally sensitive is communicating and respecting cultural differences. Providing health care on digital platforms introduces a new challenge of conveying empathy and cultural sensitivity. This study aimed to evaluate whether patients who were seen in-person had different perceptions of clinicians' empathy and cultural sensitivity compared to those who were seen via telemedicine.

**Methods:** In this cross-sectional pilot study, we recruited primary care clinicians (N=8) and their telemedicine (N=14) and in-person patients (N=20) from two clinics at Emory University in Atlanta, Georgia. We evaluated clinicians' empathy and cultural sensitivity by self-report and from patients' standpoints.

**Results:** Patient perception of clinician empathy scores were similar ( $P$  value=.31) for in-person appointments (mean=33.8) and telemedicine appointments (mean=31.3). Patient perception of culturally sensitive communication varied in the sensitivity domain and was consistently low for the domain of discrimination (suggesting low discrimination among the clinicians) regardless of the modality of the visit.

**Conclusions:** This novel pilot study demonstrated comparable empathy and culturally sensitive communication scores in telemedicine and in-person visits, highlighting the potential for continued use of telemedicine in outpatient primary care. Delivery of care via telemedicine can enable an expansion of high-quality care to underserved communities. Future studies are needed to confirm our findings to enhance the experience of telemedicine visits for patients and clinicians.

## Introduction

Empathy and culturally sensitive communication are important communication tools for clinicians in a respectful and trusting patient-centered health care setting. Empathy is a clinician's ability to understand a patient's emotional state and to convey that understanding.<sup>1,2</sup> Prior studies have shown that when patients perceive their clinicians as empathetic, they openly discuss their concerns, leading to better compliance, patient satisfaction, and improved health outcomes.<sup>3-10</sup> Empathy also improves clinician well-being and prevents burnout.<sup>4,11</sup> In addition to empathy, culturally sensitive communication is important to improve health

outcomes.<sup>12,13</sup> Culturally sensitive communication suggests an adept comprehension of patients' cultural backgrounds, acknowledging how these backgrounds shape their attitudes and beliefs while demonstrating respect for such diversities.<sup>14-16</sup> Both empathetic and culturally sensitive communication are critical to reducing disparities and improving the quality of primary care.

Telemedicine, which involves patient interactions via video or telephone conversations, experienced a rapid expansion during the COVID-19 pandemic.<sup>17-19</sup> While improving access, these digital platforms pose unique barriers to patient-physician relationships and traditional expressions of empathy. Data evaluating patient perceptions of clinician empathy during telemedicine versus in-person visits are limited.

The objective of this pilot study was to descriptively compare whether patients who were seen in-person had different perceptions of clinicians' empathy and cultural sensitivity compared to those who were seen via telemedicine.

## Methods

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We designed our study as a cross-sectional pilot study to evaluate empathy and culturally sensitive communication in telemedicine and in-person primary care outpatient services.

Using the Centers for Medicare & Medicaid Services definition of clinicians,<sup>20</sup> this study recruited seven board-certified physicians in family or internal medicine and one physician assistant who offered both telemedicine and in-person care at Emory Healthcare. We also randomly enrolled 34 of their patients (20 in-person and 14 telemedicine) in 2022 (Figure 1). All participants provided informed consent before participating, and the study was determined exempt from review by the Emory Institutional Review Board under 45 CFR 46.104(d)(2)(II) (d) (3)(b).

Survey questionnaires were administered via RedCap<sup>21,22</sup> (RedCap Consortium) and included two areas of inquiry: empathy and culturally sensitive communication.

Clinicians' self-reported empathy was determined by the Jefferson Scale of Empathy, a validated instrument that assesses perspective, compassion, and the ability to put oneself in a patient's situation. Scores ranged from 20 to 140. Patients' perception of empathy was determined by the Jefferson Scale of Patient's Perceptions of Physician Empathy, where scores ranged from 5 to 35.<sup>23,24</sup> In both scales, a higher score indicates greater empathy.

We used a modified scale from the National Center for Cultural Competence to measure clinicians' self-perception of their cultural sensitivity.<sup>25,26</sup> This checklist identifies areas of growth with the intention to improve competence in these areas. To measure culturally sensitive care from the patient perspective, we used the Clinicians' Cultural Sensitivity Survey.<sup>27</sup> In the subscale for sensitivity to cultural beliefs, a higher score indicated a better process; and in the subscale for discriminatory behavior, a lower score indicated a better process.

Participant characteristics and demographics were presented as a mean(SD) or n(%). Validated questionnaire scales were scored using established guidelines and compared for in-person versus telemedicine patients.<sup>23-29</sup> We also examined clinicians' self-rated scores. Analyses were conducted using R statistical software version 4.2.2 (R Foundation).

## Results

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We enrolled eight clinicians, most of whom were women (75%), were less than 50 years of age (75%), and were Asian (50%). Among patients, a majority were greater than or equal to 50 years of age (75% in-person vs 64%

telemedicine), identified as women, and identified as White. Employment status and educational qualifications were similar in both groups (Table 1).

### ***Empathy Scores***

Clinicians scored high on self-reported empathy, averaging 118 (range 109-125; Table 2). The average score of patients' perception of clinician empathy (by clinician) was high and comparable across telemedicine and in-person (33.8 vs 31.3;  $P=.31$ ).

### ***Culturally Sensitive Communication***

The clinician self-report (Table 3) scoring suggested that most clinicians (5 out of 8) perceived themselves as practicing culturally competent care. Scores for patient perception of clinician communication (presented as the average for each clinician; Table 4) varied widely for the subscale of cultural sensitivity for in-person (2.31-4.75) and telemedicine patients (2.52-3.84), and were comparable for subscales that measured sensitivity to alternative medicine, discrimination, family involvement, and spirituality in both modalities.

## **Discussion and Conclusions**

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Empathy and culturally sensitive communication are the foundation for an effective patient-clinician relationship. In our pilot study, patient perceptions of empathy appeared similar in telemedicine and in-person visits. Patient perception of culturally sensitive communication in the sensitivity domain varied widely in both modalities. In other subscales, such as discrimination, the scores were comparable, regardless of the modality of the visit.

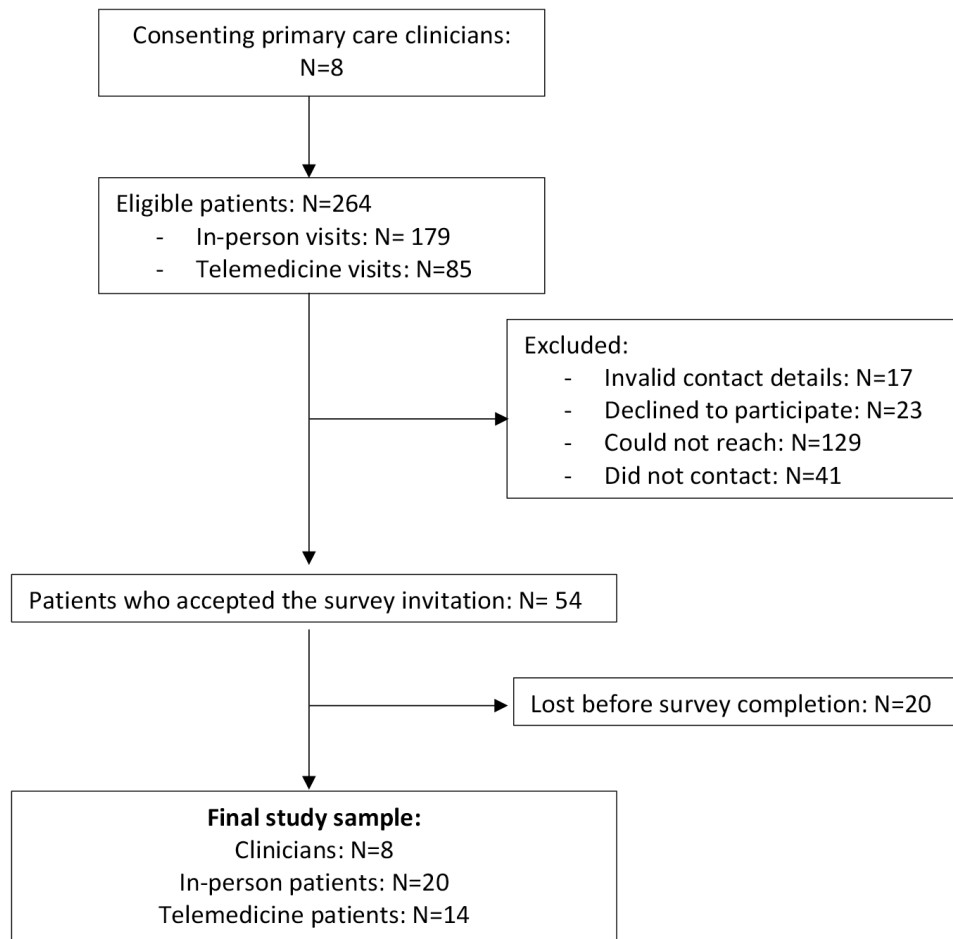
Few studies have evaluated culturally sensitive communication in both types of visits and none in primary care.<sup>30,31</sup> A study on stroke patients found no difference in the two modalities, while another evaluating psychological services found a preference for in-person visits.<sup>30,31</sup> Our pilot study found that sensitivity in cultural communication varied, and discrimination was consistently low in both modalities. Our findings also suggested that ongoing training is needed for clinicians in alternative medicine, family involvement, and spirituality to advance their competence.

Our study was a cross-sectional pilot, funded competitively by a small health innovation program. As such, we cannot infer any causal association, and generalizability is limited. However, we included various clinicians and randomly selected patient participants in both modalities for the study. Response bias, common with most studies of this nature, is a possibility. Despite these limitations, this study is a first step to understanding essential pillars of communication and patient satisfaction between two different visit modalities of health care. Delivery of care via telemedicine can enable an expansion of high-quality care to previously underserved communities. Larger studies are needed to confirm our findings, and ongoing health care interventions can enhance the telemedicine visit experience for patients and clinicians.

## **Tables and Figures**

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**Figure 1. Participant Flow Diagram**



**Table 1. Participant Characteristics**

Participant characteristic	Clinician (N=8) n (%)	Patient		P value
		In-person (N=20) n (%)	Telemedicine (N=14) n (%)	
<b>Age (years)</b>				
21-50	6 (75.0)	5 (25.0)	5 (36.0)	1.000
>51-60	2 (25.0)	15 (75.0)	9 (64.0)	
<b>Sex</b>				
Women	6 (75.0)	12 (60.0)	12 (86.0)	.260
Men	2 (25.0)	8 (40.0)	2 (14.0)	
<b>Race/ethnicity</b>				
Asian	4 (50.0)	0	1 (7.0)	.537
African American	1 (13.0)	6 (30.0)	3 (21.0)	
Hispanic	1 (13.0)	2 (10.0)	1 (7.0)	
White	2 (25.0)	10 (50.0)	7 (50.0)	
Other	0	2 (10.0)	2 (14.0)	
<b>Education</b>				
High school completed	-	1 (5.0)	0	.730
Undergraduate degree completed	-	9 (45.0)	7 (50.0)	
Some years of college	-	6 (30.0)	3 (21.0)	
Graduate degree completed	-	4 (20.0)	3 (21.0)	
Prefer not to respond	-	0	1 (7)	
<b>Employment status</b>				
Full-time	-	9 (45.0)	6 (43.0)	.691
Part-time	-	2 (10.0)	1 (7.0)	
Retired	-	0	4 (29.0)	
Student	-	7 (35.0)	0	
Unable to work	-	1 (5.0)	1 (7.0)	
Unemployed	-	0	1 (7)	
Temporarily laid off	-	0	0	
Other		1 (5.0)	1 (7.0)	
<b>Marital status</b>				
Married or domestic partnership	-	12 (60.0)	4 (29.0)	.115
Prefer not to respond	-	0	1 (7.0)	
Single/widowed /divorced	-	8 (40.0)	9 (64.0)	
<b>Health insurance status</b>				
Medicaid	-	0	1 (7.0)	.623
Medicare	-	8 (40.0)	5 (36.0)	
Other	-	4 (20.0)	1(7.0)	
Prefer not to respond	-	1(5.0)	0	
Private health insurance	-	7 (35.0)	7 (50.0)	

Table 1: Continued

Participant characteristic	Clinician (N=8) n (%)	Patient		P value
		In-person (N=20) n (%)	Telemedicine (N=14) n (%)	
<b>Length of clinician-patient relationship</b>				
<1 year	-	6 (30.0)	3 (21.0)	
1-5 years	-	6 (30.0)	5 (36.0)	
6-10 years	-	1 (5.0)	0	.956
>10 years	-	5 (25.0)	4 (29.0)	
First appointment	-	2 (10.0)	2 (14.0)	
<b>Time spent by clinician at the appointment</b>				
<15 minutes	-	3 (15.0)	3 (21.0)	
15-30 minutes	-	14 (70.0)	9 (64.0)	.489
30-45 minutes	-	3 (15.0)	1 (7.0)	
45-60 minutes	-	0	1 (7.0)	
<b>Length of practice</b>				
1-5 years	3 (37.5)	-	-	
6-10 years	1 (12.5)	-	-	
11-15 years	1 (12.5)	-	-	
16-20 years	1 (12.5)	-	-	
>20 years	2 (25.0)	-	-	
<b>Comfort with technology</b>	0	-	-	
Extremely comfortable	0	-	-	
Comfortable	0	-	-	
Uncomfortable	0	-	-	
Extremely uncomfortable	8 (100.0)	-	-	

**Table 2. Empathy Scores Using the Jefferson Scale of Empathy**

Empathy score			
Clinician		Patient scores**	
No.	Score*	In-person	Telemedicine***
1	125.0	29.0	29.3
2	118.0	29.0	35.0
3	119.0	30.7	-
4	109.0	33.5	34.0
5	117.0	35.0	35.0
6	123.0	35.0	-
7	121.0	24.0	35.0
8	111.0	33.8	34.3

\*Clinician scores are individual scores obtained from the administration of the Jefferson Scale of Empathy. Scores in this study range from 109 to 125.

\*\*Patient scores are averaged across each patient group, per clinician, obtained from the administration of the Jefferson Scale of Patient Perceptions of Physician Empathy. Scores in this study range from 13 to 35.

\*\*\*Two clinicians did not have telemedicine patients during the study period. This also meant that statistical significance between the two groups of patients could not be determined for these two clinicians.

**Table 3. Self-Reported Culturally Sensitive Communication of Clinicians, as Determined From a Modified Self-Assessment Checklist for Personnel Providing Primary Health Care Services From the National Center for Cultural Competence**

Clinician	Percentage of questions answered as*		
	A Things I do frequently, or statement applies to me to a great degree	B Things I do occasionally, or statement applies to me to a moderate degree	C* Things I do rarely or never, or statement applies to me to a minimal degree or not at all
1	57.14	42.86	0
2	64.29	7.14	28.57
3	50.00	7.14	42.86
4	7.14	14.29	78.57
5	35.71	50.00	14.29
6	57.14	28.57	14.29
7	78.57	14.29	7.14
8	35.71	50.00	14.29

\*A greater number of answer choices that are Cs indicates inadequate culturally sensitive communication.

**Table 4. Patient Perception of Culturally Sensitive Communication of Clinician\***

In-person health care visits								
DOMAIN and scales	Clinician 1 (N=1)	Clinician 2 (N=5)	Clinician 3 (N=3)	Clinician 4 (N=2)	Clinician 5 (N=3)	Clinician 6 (N=1)	Clinician 7 (N=1)	Clinician 8 (N=4)
<b>SENSITIVITY TO CULTURAL BELIEFS AND PRACTICES</b>								
Complementary and alternative medicine	5.00	2.75	3.33	1.00	3.33	2.00	2.00	1.75
Mind-body connections	5.00	3.88	4.00	3.50	3.33	3.50	3.00	3.25
Causal attribution of health problem	5.00	4.00	4.00	4.00	4.67	4.00	4.00	4.00
Preventive care	5.00	4.13	4.33	4.00	4.33	4.50	1.50	3.38
Family involvement	5.00	2.50	1.33	1.00	3.00	5.00	1.00	1.25
Modesty	5.00	4.25	4.67	5.00	3.67	5.00	3.00	4.00
Use of prescription medications	5.00	3.25	3.67	3.00	4.67	4.00	3.00	3.50
Spirituality	3.00	2.25	1.33	1.00	2.33	2.00	1.00	1.00
<b>Domain mean score**</b>	<b>4.75</b>	<b>3.38</b>	<b>3.33</b>	<b>2.81</b>	<b>3.67</b>	<b>3.75</b>	<b>2.31</b>	<b>2.77</b>
<b>DISCRIMINATION</b>								
Discrimination due to education	2.00	1.63	1.00	1.00	1.67	3.00	2.00	1.00
Discrimination due to race/ethnicity	1.50	1.00	1.00	1.25	1.67	1.00	2.00	1.00
Staff discrimination due to race/ethnicity	-	-	-	-	-	-	-	-
<b>Domain mean score**</b>	<b>1.75</b>	<b>1.32</b>	<b>1.00</b>	<b>1.13</b>	<b>1.67</b>	<b>2.00</b>	<b>2.00</b>	<b>1.00</b>
For persons with limited English proficiency								
Sensitivity to language needs	-	-	-	-	-	-	-	-
Discrimination due to language needs	-	-	-	-	-	-	-	-
<b>For immigrants</b>								
Sensitivity to immigrant status	-	-	-	-	-	-	-	-



Table 4: Continued

Telemedicine health care visits								
DOMAIN and scales	Clinician 1 (N=3)	Clinician 2 (N=1)	Clinician 3 (N=0)	Clinician 4 (N=1)	Clinician 5 (N=3)	Clinician 6 (N=0)	Clinician 7 (N=2)	Clinician 8 (N=4)
<b>SENSITIVITY TO CULTURAL BELIEFS AND PRACTICES</b>								
Complementary and alternative medicine	1.33	-	-	1.00	2.33	-	3.00	2.00
Mind-body connections	2.50	5.00	-	3.00	4.33	-	4.25	3.13
Causal attribution of health problem	5.00	5.00	-	5.00	4.33	-	5.00	3.00
Preventive care	2.33	4.00	-	4.00	4.67	-	5.00	4.13
Family involvement	1.00	1.00	-	1.00	1.67	-	3.00	1.00
Modesty	4.67	5.00	-	5.00	5.00	-	5.00	4.75
Use of prescription medications	2.33	5.00	-	3.00	2.67	-	4.00	2.50
Spirituality	1.00	1.00	-	5.00	1.67	-	1.50	1.25
Domain mean score**	2.52	3.71	-	3.38	3.33	-	3.84	2.72
<b>DISCRIMINATION</b>								
Discrimination due to education	1.00	1.00	-	1.00	1.17	-	1.00	1.00
Discrimination due to race/ethnicity	1.00	1.00	-	1.00	1.17	-	1.00	1.00
Staff discrimination due to race/ethnicity	-	-	-	-	-	-	-	-
Domain mean score**	1.00	1.00	-	1.00	1.17	-	1.00	1.00
For persons with limited English proficiency								
Sensitivity to language needs	-	-	-	-	-	-	-	-
Discrimination due to language needs	-	-	-	-	-	-	-	-
<b>For immigrants</b>								
Sensitivity to immigrant status	-	-	-	-	-	-	-	-

\*Data were collected using the Clinicians' Cultural Sensitivity Survey. Domains are capitalized, and underlying scales are listed below each domain. No patients identified as immigrants or as having limited English proficiency in this study. A better process is indicated by high scores for the domain of sensitivity of cultural beliefs and practices and a low score for the domain of discrimination.

\*\*The domain mean score was calculated as the average of the nonmissing subscales, by clinician.

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