

Associations Between Gender and Racial Patient-Physician Concordance and Visit Outcomes Among Hypertensive Patients in Primary Care



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BACKGROUND

Patient-provider concordance on gender and race could impact communication, satisfaction, trust, and adherence, important for blood pressure control. Our purpose was to examine the association between such concordance and visit-specific outcomes among hypertensive patients.

METHODS

This is a secondary analysis of a trial to improve shared decision making.¹ Patient surveys assessed somatization (PHQ-15), depression (PHQ-9), anxiety (GAD-7), satisfaction (Rand-9), and trust (Trust in Physician Scale). Encounter audiotapes were coded for the degree of shared medical decision-making (Option-5), communication patterns and quality (Roter Interaction Analysis System with Quality Composites). Providers rated patient difficulty (Difficult Doctor Patient Relationship Questionnaire), with scores greater than 30 indicative of difficulty.² We measured medication adherence (Morisky, pill counts) and blood pressure at baseline and 1 month. We compared concordant and discordant groups using regression (linear or logistic) with clustering on providers (STATA v. 16.1) with $p < 0.01$ (99% CI) considered significant because of multiple comparisons. Difficulty was adjusted for somatization, depression and anxiety.²

RESULTS

There were 129 patients (average age 65.9 years, 53% female, 36% White, 56% Black), seen by 11 providers (average age 42.7 years old, 46% female, 45% White, 27% Black). Among these encounters, 68 (53%) patient-provider dyads

were concordant for gender and 43 (33%) for race. There were no differences in decision-making, encounter quality, or outcomes between concordant or discordant dyads (Table 1), although race discordant dyads were more likely to be perceived as difficult by providers (OR: 4.6; 99% CI: 1.1–21.4). White-White dyads had shorter encounters (Table 2). Black-Black dyads had slightly higher difficulty scores but were not perceived by their provider as more difficult (OR: 4.8; 99% CI: 0.68–23.8). There were no differences in medication adherence or blood pressures at 1 month (Tables 1 and 2).

DISCUSSION

We found no differences in communication or shared medical decision-making between concordant and discordant dyads and no differences in patient satisfaction, trust, medication adherence, or blood pressure. However, providers from discordant dyads were more likely to rate patients as “difficult.” When broken out into specific types of concordant and discordant dyads, male providers were more dominant with male patients and White-White dyad visits were shorter. While Black-Black dyads had higher difficulty scores, this did not translate to a higher percentage being experienced as difficult.

Similar to our study, previous articles have found the impact of provider and patient concordance for gender³ or race⁴ to be mixed, with most having little impact. In contrast to our findings, other studies have found that concordant visits were longer⁵ and had better shared medical decision-making⁶ and higher patient satisfaction.⁷

Difficulty is a complex construct. Most patients experienced as difficult have somatization, personality disorders, or undiagnosed mental disorders.² This is the first study to find an impact of discordance between provider and patient race on provider perceptions of difficulty. It is possible that common patient behaviors, like asking questions or advocating for oneself, are perceived differently in racially discordant dyads, leading to the perception of difficulty. Surprisingly, we found that Black patients had slightly higher “difficulty” ratings by Black providers, though this did not translate to higher rates of being considered difficult. While providers found discordant encounters to be more difficult, this did not reduce patient satisfaction or trust, lower adherence, or result in worse blood pressure control.

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Table 1 Visit-Specific Outcomes by Gender and Racial Concordance, Among 126 Hypertensive Patients

	Gender			Race		
	Concordant	Discordant	p	Concordant	Discordant	p
Somatization Score (PHQ-15)	6.5	6.8	0.73	6.6	6.3	0.74
Anxiety score (GAD-7)	3.4	4.5	0.24	3.4	3.9	0.95
Depression Score (PHQ-9)	3.0	4.8	0.09	3.8	3.8	0.95
Encounter duration (min)	29.6	29.6	0.98	29.9	29.4	0.90
Number of utterances (RIAS)	631.8	640.9	0.87	621.4	657.0	0.63
Doctor dominance (% provider utterances, RIAS)	57%	57%	0.81	57%	57%	0.89
Quality of communication (RIAS)						
Data gathering biomedical	44.9	41.5	0.63	40.1	45.8	0.33
Data gathering psychosocial	6.5	6.1	0.65	6.8	6.1	0.69
Pt education biomedical	122.2	116.2	0.50	121.9	118.6	0.84
Pt education psychosocial	6.5	8.1	0.38	6.7	7.7	0.58
Patient activation	35.3	34.9	0.91	34.5	35.6	0.78
Rapport building positive	73.3	85.6	0.17	81.9	76.3	0.56
Rapport building emotional	9.2	8.8	0.79	9.5	8.7	0.68
Rapport building negative	0.86	1.0	0.66	1.2	0.75	0.34
Shared medical decision-making (Option-5)	28.1	27.3	0.79	27.8	27.6	0.99
Satisfaction (Rand-9, 0–25)	23.4	24.2	0.08	23.7	23.7	0.98
Trust (trust in physician, 0–40)	32.4	33.6	0.20	33.8	33.2	0.15
Difficulty (DDPRQ, 0–30)*	17.6	15.4	0.20	13.5	19.1	0.07
Adherence						
Pill count, %	49.3%	41.8%	0.27	49.3%	44.2%	0.31
Morisky score	5.08	5.13	0.78	5.05	5.13	0.71
SBP (mmHg)	134.8	126.8	0.11	135.3	126.5	0.09
SBP improvement from baseline (mmHg)	3.5	6.3	0.51	2.3	7.9	.21

*Adjusted for somatization, depression, and anxiety symptom severity

There are several limitations to our study. This is a single study site with a limited number of patients and providers; we were underpowered to show potentially important differences. Given the small number of providers, our results could be driven by 1 or 2 personal styles, and may not be representative

of physicians more generally. Higher difficulty scores in Black-Black dyads seem improbable and are likely due to the small number of Black patient-provider dyads. Finally, adherence measures are imperfect, though there is no reason to suspect our adherence measure would differ by dyad.

Table 2 Visit-Specific Outcomes Stratified by Concordance Among 126 Hypertensive Patients

	Gender				Race					
	MM n=29	FF n=39	Discordant n=43	p	BB n=35	BW n=23	WW n=19	WB n=10	Discordant n=27	p
Encounter duration (min)	30.3	29.1	29.6	0.97	27.8	37.8	19.2	25.3	29.8	<0.0001
Number of utterances (RIAS)	616.9	643.1	640.9	0.92	612.3	795.5	475.5	547.75	658.1	0.004
Doctor dominance (% provider utterances, RIAS)	60.8%	53.7%	57.2%	0.004	56%	54%	60%	60%	57%	0.02
Quality of communication (RIAS)										
Data gathering biomedical	44.6	45.1	41.5	0.88	51.7	44.4	32.7	32.4	44.1	0.07
Data gathering psychosocial	7.1	6.2	6.1	0.70	6.2	6.6	5.4	1.9	6.2	0.02
Pt education biomedical	130.6	115.9	116.1	0.41	108.2	144.2	96.2	142.1	121.7	0.007
Pt education psychosocial	7.1	6.1	8.1	0.69	5.3	9.2	6.1	6.3	8.4	0.51
Patient activation	33.9	36.4	34.9	0.93	31.5	38.5	28.6	28.5	42.8	0.09
Rapport building positive	72.5	74.0	85.6	0.37	79.1	97.3	59.4	60.5	78.6	0.20
Rapport building emotional	11.0	7.8	8.8	0.42	6.4	12.7	5.7	7.6	11.4	0.19
Rapport building negative	0.85	0.86	1.1	0.89	1.0	1.4	0.8	0.6	0.7	0.75
Shared medical decision-making (Op- tion-5)	32.1	25	27.3	0.22	24.9	28.9	25.9	40.6	27.2	0.09
Satisfaction (Rand-9, 0–25)	23.2	23.5	24.2	0.18	23.7	24.6	22.7	23.9	23.6	0.08
Trust	32.7	32.2	33.6	0.40	31.1	35.1	32.6	33.2	33.1	0.04
(Trust in physician, 0–40)										
Difficulty (DDPRQ, 0–30)*	19.8	25.9	21.8	0.11	22.8	13.9	13.6	14.5	18.9	0.009
Adherence										
Pill count, %	46.8%	51.4%	41.8%	0.37	42.9%	45.3%	54.4%	40.9%	47.1%	0.55
Morisky score	5.17	5.0	5.13	0.75	4.9	5.3	4.7	5.7	5.1	0.19
SBP (mmHg)	138.4	131.7	126.8	0.20	132.0	120.9	133.3	140.3	137.0	0.16
SBP Improvement from baseline (mmHg)	2.8	3.1	6.3	0.78	2.7	9.5	5.8	5.4	0.6	0.54

*Adjusted for somatization, depression, and anxiety symptom severity. MM male patient male provider, FF female patient female provider, BB Black patient Black provider, WW White patient White provider, BW Black patient White provider, WB White patient Black provider

CONCLUSION

There are few differences in communication, shared medical decision-making, trust, or adherence between patient-provider dyads that were gender or racially concordant, compared to discordant ones. Providers seeing patients of a different race are more likely to experience the encounter as difficult. Cultural sensitivity training may help reduce encounter difficulty, though more research is needed to confirm this relationship and to determine effective interventions.

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