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Racial Differences in Satisfaction with VA Health Care: A Mixed Methods Pilot Study

Susan L. Zickmund · Kelly H. Burkitt · Shasha Gao · Roslyn A. Stone · Keri L. Rodriguez · Galen E. Switzer · Judy A. Shea · Nichole K. Bayliss · Rebecca Meiksin · Mary B. Walsh · Michael J. Fine

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Abstract
Introduction As satisfied patients are more adherent and play a more active role in their own care, a better understanding of factors associated with patient satisfaction is important.
Purpose In response to a United States Veterans Administration (VA) Hospital Report Card that revealed lower levels of satisfaction with health care for African Americans compared to Whites, we conducted a mixed methods pilot study to obtain preliminary qualitative and quantitative information about possible underlying reasons for these racial differences.
Methods We conducted telephone interviews with 30 African American and 31 White veterans with recent inpatient and/or outpatient health care visits at three urban VA Medical Centers. We coded the qualitative interviews in terms of identified themes within defined domains. We summarized racial differences using ordinal logistic regression for Likert scale outcomes and used random effects logistic regression to assess racial differences at the domain level.
Results Compared to Whites, African Americans were younger ($p<0.001$) and better educated ($p=0.04$). Qualitatively, African Americans reported less satisfaction with trust/confidence in their VA providers and healthcare system and less satisfaction with patient-provider communication. Quantitatively, African Americans reported less satisfaction with outpatient care (odds ratio=0.28; 95 % confidence interval (CI) 0.10–0.82), but not inpatient care. At the domain level, African Americans were significantly less likely than Whites to express satisfaction themes in the domain of trust/confidence (odds ratio=0.36; 95 % CI 0.18–0.73).
Conclusion The current pilot study demonstrates racial differences in satisfaction with outpatient care and identifies some specific sources of dissatisfaction. Future research will include a large national cohort, including Hispanic veterans, in order to gain further insight into the sources of racial and ethnic differences in satisfaction with VA care and inform future interventions.

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S. L. Zickmund (✉) · K. H. Burkitt · S. Gao · R. A. Stone · K. L. Rodriguez · G. E. Switzer · N. K. Bayliss · M. B. Walsh · M. J. Fine
VA Pittsburgh Healthcare System, Center for Health Equity Research and Promotion, University Drive (151C), Building 30, Pittsburgh, PA 15240, USA
e-mail: Susan.Zickmund@va.gov

S. L. Zickmund · K. L. Rodriguez · G. E. Switzer · M. B. Walsh · M. J. Fine
Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA 15261, USA

R. A. Stone
Department of Biostatistics, University of Pittsburgh Graduate School of Public Health, Pittsburgh, PA 15261, USA

G. E. Switzer
Department of Psychiatry, University of Pittsburgh School of Medicine, Pittsburgh, PA 15213, USA

J. A. Shea
Philadelphia VA Medical Center, Center for Health Equity Research and Promotion, Philadelphia, PA 19104, USA

N. K. Bayliss
Department of Psychology, Chatham University, Pittsburgh, PA 15232, USA

R. Meiksin
Gender Violence and Health Centre, London School of Hygiene and Tropical Medicine, London, England

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Introduction

Patient satisfaction ratings are key indicators of how effectively healthcare plans and health providers meet patient expectations [1]. Satisfied patients are more compliant with recommended medical regimens and treatments [2–4], play a more active role in their own care [5], and have improved continuity of care with their medical providers [6]. A better understanding of factors associated with patient satisfaction could help to improve the effectiveness of healthcare delivery.

Patient satisfaction is a performance measure in the Veterans Administration (VA) Healthcare System, the largest integrated healthcare system within the US, and is assessed system-wide using the Survey of Healthcare Experiences of Patients (SHEP) [7, 8]. A 2008 report showed that among users of the VA Healthcare System, African Americans were less satisfied than Whites [9], which is important as more than 15 % of US veterans are African American [10]. The VA commissioned a mixed methods pilot study to obtain preliminary qualitative and quantitative information about possible underlying reasons for these racial differences from patients' viewpoints, using open-ended and survey responses. We describe our approach combining qualitative data analysis, Likert scale questions, and random effects models to identify racial differences in satisfaction and to provide insights into the underlying reasons for observed differences.

Methods

We conducted telephone interviews to collect patient demographic data, narrative accounts of patients' satisfaction with their health care and quantitative satisfaction data at three geographically dispersed large urban VA Medical Centers (Atlanta, GA; Philadelphia, PA; and Chicago, IL) that serve relatively high proportions of African Americans. Large urban VA facilities are associated with lower African American satisfaction rates, as documented in an internal VA report [11]. The VA Pittsburgh Healthcare System Institutional Review Board approved this project, which was initially conceived as a quality improvement initiative.

Recruitment of Study Participants

We based our study's target sample on the principle of thematic saturation, which occurs in qualitative research when additional data collection reveals no new themes. Thematic saturation with a reasonably homogenous population can be achieved with a minimum of nine interviews [12]. For this study, we chose to use ten interviews per subgroup. To ensure that thematic saturation was reached, we listened to the interviews to verify that we were hearing similar topics expressed by the end of data collection, before closing recruitment. We aimed to collect open-ended interview and Likert data from a total of 60 participants (ten African Americans and 10 Whites at each of the three sites).

We received site-specific enrollment data for African Americans and Whites who had experienced outpatient or inpatient care in the previous 6 months (June or July 2008) at any of the three participating VA Medical Centers. We generated a stratified random sample of potential respondents (100 African American and 100 White patients per site). Patients of Latino ethnicity and/or other or unknown race, and those without a current telephone number, were excluded from the sampling frame. We verified race and ethnicity data during the open-ended patient interviews.

The 600 identified potential respondents each received a letter from the VA Associate Deputy Undersecretary for Health for Quality and Safety informing them that they might be contacted to participate in a 1-h telephone interview regarding their satisfaction with VA health care and that respondents would receive a $30 honorarium for completing the interview. Potential respondents were asked to call a toll-free number if they preferred not to be contacted.

From a randomized list at each site, study staff telephoned potential respondents to answer questions about the project and to confirm eligibility and willingness to participate until ten African American and ten White participants were recruited. We excluded those who were unable to speak English, reported being too ill to communicate on the telephone, or declined to participate. After obtaining verbal informed consent, we digitally recorded semi-structured telephone interviews. Two trained research assistants recorded demographic data and conducted the interviews.

Interview Script

The telephone interview included demographic, open-ended and close-ended (i.e., yes/no, Likert-type) questions about satisfaction with VA health care (for the interview script, see Online Resource). Demographic data consisted of age, gender, race, marital status, education level, employment, residence, and years of enrollment in the VA Healthcare System. Respondents rated satisfaction with their overall, outpatient, and inpatient care using a 7-point scale ranging from "completely satisfied" to "completely dissatisfied." Drawing on questions used in the well-validated SF-36 Health Survey 1.0 [13, 14], respondents first rated their health using a 5-point scale from "excellent" to "poor" and then compared that health rating to 1 year previously using a 5-point scale ranging from "much better" to "much worse."

The interview script addressed eight domains of health care: six were used in the SHEP ambulatory and inpatient

surveys that were based on the Picker Patient Experience Questionnaire (i.e., Communication with Medical Providers, Access to Medical Care, Adequacy of Pain Management, Feelings of Respect, Coordination of Care, and Involvement of Family and Friends) and two were based on the health disparities literature (i.e., trust/confidence in medical providers and the health care system, and the role of race in the provision of health care) [2, 15–17]. Preliminary analyses revealed very few responses in the Involvement of Family and Friends domain, so this domain is not reported.

Qualitative Coding

For the qualitative thematic analysis, we employed the editing approach to textual data developed by Miller and Crabtree [18]. Using an iterative process, two analysts (SLZ, NKB) created thematic categories for codes relevant to satisfaction and dissatisfaction with VA health care. Both analysts listened to 10 % of the interviews and took notes on the themes that arose. After discussing the themes, they developed a codebook, coded one-third of the interviews together, adjudicating differences as they arose, and coded the remaining interviews separately. For each interview, every satisfaction (or dissatisfaction) utterance was coded as it arose. Because three domains (Adequacy of Pain Management, Feelings of Respect, and the Role of Race in VA Health Care) had few meaningful satisfaction codes ("I like it"; "it's fine"), these domains included only dissatisfaction codes. Participants could express multiple satisfaction and dissatisfaction themes within or across domains, and passages could be coded with several different codes when deemed appropriate.

After coding was complete, each satisfaction (or dissatisfaction) theme was assigned to a single domain (e.g., "long wait times" was assigned to the domain of "Access to Medical Care"). We compared the frequencies of individual satisfaction (or dissatisfaction) themes by race within each domain using Fisher's exact tests, and selected quotations related to those themes with relatively small nominal p values (i.e., ≤ 0.05). Quotations were selected that provided more detailed insight into the themes expressed by African Americans and Whites in each domain. We also included negative examples where race did not play a role in the expressed satisfaction (or dissatisfaction) with care. Because few Coordination of Care themes were mentioned, we reported no thematic quotations for this domain.

Statistical Analyses

We summarized demographic and health characteristics by the respondent's race, compared categorical variables using Fisher's exact tests, and compared continuous variables using t tests. We assigned Likert scores to satisfaction outcomes as follows: 1="completely dissatisfied;" 2="very dissatisfied;" 3="somewhat dissatisfied;"4="neither satisfied nor dissatisfied;" 5="somewhat satisfied;" 6="very satisfied;" and 7="completely satisfied." Considering the sample size and study goal, we collapsed sparse Likert response data in the "neither satisfied nor dissatisfied," "somewhat dissatisfied," "very dissatisfied," and "completely dissatisfied" categories into one response (i.e., "not satisfied"), and used ordinal logistic regression to compare the ordered categories of "completely satisfied," "very satisfied," "somewhat satisfied," and as combined reference category. We checked the proportional odds assumption for the ordinal models.

We used random effect logistic regression to summarize racial differences in the occurrence of individual satisfaction (or dissatisfaction) themes within each domain [14, 19]. Each participant's response was assigned a 1 or 0, as appropriate, denoting the presence or absence of each theme. Within each domain, we fitted separate random intercept logistic models for themes denoting satisfaction and dissatisfaction; each participant contributed a vector of responses to the corresponding themes (e.g., we modeled the probability of positive responses to the identified satisfaction themes regarding access). Each model included a random effect for respondent and fixed effects (i.e., dummy variables) for site, race, and theme. We assessed heterogeneity across sites and possible race-by-theme interactions using Wald tests. We considered two-tailed p values<0.05 to be statistically significant for both the ordinal and random effects logistic regression models.

Results

Only two of the 600 participants who were mailed letters declined to be contacted (one African American, one White). Among the 89 potentially eligible participants contacted, 9 (10.1 %) were excluded due to poor health, 2 (2.2 %) were deceased, and 17 (19.1 %) declined to participate. Audio-recorded interviews were conducted for 60 of the 61 eligible participants who consented, and the team recruited a site- and race-matched replacement for the single respondent with missing audio data. The final study sample (68.5 % of those contacted) had qualitative data for 60 respondents (30 African American, 30 White) and quantitative data for 61 respondents (30 African American, 31 White).

Demographic and Health Characteristics

Of the 61 patients interviewed, most (86.7 % of African Americans and 96.8 % of Whites) had an outpatient visit in the prior 6 months and approximately half (60 % of African Americans and 48.4 % of Whites) had a recent inpatient stay. Consistent with the veteran population which is more than 90 % male [10], almost all respondents (95.1 %) were male.

As shown in Table 1, African Americans were significantly younger than Whites (average age 57.1 vs. 63.7 years, $p<0.001$) and were significantly more likely to have graduated from high school ($p=0.04$). They were not significantly

Table 1 Demographic and health characteristics of respondents, by race

Characteristic	African Americans $N=30$		Whites $N=31$		p value
	Mean	SD[a]	Mean	SD	
Age	57.1	8.6	63.7	5.5	<0.001[b]
Years enrolled in VA Healthcare System ($n=60$)	20.3	13.4	15.6	9.4	0.12[b]
	n	%	*n*	%	
Male	28	93.3	30	96.8	0.61[c]
Marital status					0.12[c]
Single, never married	10	33.3	8	25.8	
Married/Living as married	9	30.0	15	48.4	
Widowed, not married	1	3.3	0	0.0	
Divorced, not married	6	20.0	8	25.8	
Separated	4	13.3	0	0.0	
Education					0.04[c]
Grades 9–11	3	10.0	10	32.3	
High school/GED	8	26.7	4	12.9	
Some college or associate degree	12	40.0	13	41.9	
College graduate	7	23.3	2	6.5	
Other	0	0.0	2	6.5	
Employment					0.21[c]
Full-time	3	10.0	3	9.7	
Part-time	1	3.3	0	0.0	
Retired	4	13.3	1	3.2	
Unemployed, not retired	6	20.0	13	41.9	
Disabled	16	53.3	14	45.2	
Residence					0.06[c]
Own your own home	8	26.7	16	51.6	
Rent	18	60.0	10	32.3	
Group setting	4	13.3	3	9.7	
No permanent residence	0	0.0	2	6.5	
Health status					0.06[d]
Poor	6	20.0	1	3.2	
Fair	11	36.7	9	29.0	
Good	9	30.0	17	54.8	
Very good	4	13.3	4	12.9	
Health compared to 1 year ago[e]					0.08[d]
Much worse	4	13.8	2	6.5	
Somewhat worse	7	24.1	1	3.2	
About the same	9	31.0	15	48.4	
Somewhat better	3	10.3	5	16.1	
Much better	6	20.7	8	25.8	

[a] SD denotes standard deviation

[b] *t* tests were used for racial comparisons

[c] Fisher's exact tests were used for racial comparisons

[d] Ordinal logistic regression was used for racial comparisons

[e] Percentages were calculated after a "don't know" response from one African American was removed from the denominator

more likely to rent rather than own homes ($p=0.06$) or to describe their current health status as poor ($p=0.06$).

Qualitative Themes within Domains

We identified 87 dissatisfaction and 48 satisfaction themes across the domains. The coded qualitative themes within each domain are summarized by race in Table 2. Only those codes mentioned at least five times are listed.

Trust/Confidence in Medical Providers and the Healthcare System

Whites were more likely to express satisfaction themes in this domain (Table 2). Satisfaction themes include the VA being the "best health care system/better than private sector," expressing praise for its status as a "teaching hospital," noting the strength of its "primary care providers," recognizing the "quality of care," and praising the "extraordinary, life-saving care" provided. The following statement exemplifies a strong positive sense of satisfaction that was expressed more often by Whites in the interviews:

> I can't begin to tell you how I've been cared for by mostly the VA. And I think it's because of the efforts of the advocacy of my doctor…This man will call me at 7, 8, 9, 10 o'clock at night, when he's done or he'll call me in the morning, if it's something where there's an area of urgency. He has just been terrific.

In contrast, a textual example by an African American described his experience of losing trust/confidence in his VA providers after the remission of his cystic adenoid cancer resulted in a brain metastasis:

> The whole time that I was in remission nobody ever sent me out a form, a CAT scan, an MRI or anything. I had one doctor give me a chest x-ray and that was about 6 months before it came back…. I don't believe a doctor knew anything about this. I put my trust in them.

Yet this advocacy for the VA by Whites was not universal. One White veteran began by reading a letter of complaint that he had sent related to the VA:

> Let me give you an opening statement. "I'm a retired, disabled, service-connected military veteran with 20 years' service, and I rely on the Veterans' administrative healthcare system. Until recently, my needs have been adequately addressed by the VA medical center of Decatur. Currently, continuity of medical treatment is lacking. Rapid turn-over of caregivers, inaccurate progress notes, and administrative incompetence hinder quality of care."

Communication with Medical Providers

Whites were more likely to express the satisfaction theme about communicating with their "outstanding providers" in the VA. One White participant described his communication experience:

> The doctors listen to what you are telling them…and they will explain the use of medication that they give you, what the tests they're planning on giving you, your overall treatment. They're very receptive and they don't talk down to you, which is good, because some doctors will.

African Americans expressed concerns about the communication patterns they experienced with their providers. One African American male noted his frustration with his provider:

> [They] just ignore you, and sit there and type on the computer. If you ask them a question, they say "Hold on just a minute, let me get this in the computer." They're more worried about that damn computer than they are about their patient… If you call it bedside manner, their bedside manner ain't worth a flip.

Nonetheless, there were cases where African American veterans described positive experiences, such as one participant who noted that his providers "show a lot of concern. That's a big point. They actually seem like they're concerned about my health."

Access to Medical Care

Whites were more likely to use satisfaction themes to praise the "wide range of available services available." One White participant explained why the diversity of services mattered:

> The abundance of care, actually. I've been through the PTSD 7 week hospitalization program twice. I've been through 5 years of group counseling, and now a couple of years of individual counseling. I've had eye care and a colonoscopy…. So, you know, I mean, there's nothing these guys haven't done for me.

African Americans, on the other hand, were more likely to express dissatisfaction with "follow-up care." One African American expressed his difficulty in accessing the VA, specifically in finding a primary care provider:

> I'm trying to get a primary care doctor…. and the doctor, my psychiatrist, has put me in an order for a consult. He

Table 2 Coding of dissatisfaction and satisfaction codes within domains of healthcare, by race[a]

Domains of healthcare and codes of dissatisfaction and satisfaction	African Americans N=30		Whites N=30		p value[b]
	n	%	n	%	
Trust/confidence in medical providers and the healthcare system					
Dissatisfaction codes					
Primary care provider	12	40	8	27	0.41
Emergency department	11	37	6	20	0.25
Medical incompetence	11	37	6	20	0.25
Providers not giving enough information	11	37	7	23	0.40
Quality of care	9	30	9	30	>0.99
Quality of doctors[c]	9	30	4	13	0.21
Serious experience with incompetent provider(s)	9	30	9	30	>0.99
Personnel not doing their jobs[c]	8	27	4	13	0.33
Provider continuity	8	27	9	30	>0.99
VA poorer healthcare system/worse than private	8	27	5	17	0.53
Misdiagnosis/finding diagnosis	7	23	6	20	>0.99
Provider retention	7	23	7	23	>0.99
Differential diagnoses/advice from providers	6	20	6	20	>0.99
Provider does not know patient medical history[c]	6	20	3	10	0.47
Quality of specialists	6	20	8	27	0.76
Quality of nurses	5	17	6	20	>0.99
Teaching hospital	5	17	7	23	0.75
Inefficient care	4	13	5	17	>0.99
Medical care inaccuracies/system barriers	4	13	7	23	0.51
Satisfaction codes					
Best healthcare system/better than private sector[c]	2	7	10	33	0.02
Teaching hospital[c]	0	0	6	20	0.02
Primary care provider[c]	10	33	19	63	0.04
Quality of care[c]	18	60	26	87	0.04
Extraordinary, life-saving care[c]	0	0	5	17	0.05
Quality of doctors	10	33	18	60	0.07
Quality of nurses[c]	11	37	5	17	0.14
Medical thoroughness	7	23	13	43	0.17
Quality of specialists	11	37	16	53	0.30
Service	6	20	7	23	>0.99
Technological/facilities upgrades[c]	2	7	6	20	0.25
Efficient care	4	13	5	17	>0.99
Emergency department	2	7	3	10	>0.99
Communication with medical providers					
Dissatisfaction codes					
Rude/disrespectful	11	37	14	47	0.60
Rushed/not listening	9	30	9	30	>0.99
Cold/not compassionate	8	27	12	40	0.41
Questions not answered[c]	4	13	8	27	0.33
Unprofessional	3	10	3	10	>0.99
Understanding foreign providers[c]	2	7	6	20	0.25
Satisfaction codes					
Outstanding providers[c]	2	7	11	37	0.01
Personal relationship with provider[c]	6	20	13	43	0.09
Satisfaction codes (cont)					

Table 2 (continued)

Domains of healthcare and codes of dissatisfaction and satisfaction	African Americans *N*=30		Whites *N*=30		*p* value[b]
	n	%	*n*	%	
Sharing needed information	14	47	21	70	0.12
Explanations supplied	12	40	16	53	0.44
Caring/compassionate	11	37	14	47	0.60
Courteous/respectful	11	37	14	47	0.60
Staff helpful	8	27	9	30	>0.99
Questions answered	5	17	8	27	0.53
Providers professional	3	10	5	17	0.71
Access to medical care					
Dissatisfaction codes					
Follow-up care[c]	7	23	1	3	0.05
Navigating VA system[c]	10	33	4	13	0.13
Parking issues[c]	2	7	7	23	0.15
Appointment scheduling	15	50	9	30	0.19
Long wait time (waiting room)	21	70	23	77	0.77
Long wait time (scheduling appointments)	13	43	12	40	>0.99
Crowded/busy	10	33	13	43	0.60
Service connectedness	10	33	11	37	>0.99
Phone system	8	27	6	20	0.76
Need more providers/specialists	7	23	4	13	0.51
Difficult to contact providers	5	17	10	33	0.23
Time needed with providers	5	17	7	23	0.75
Pharmacy	5	17	6	20	>0.99
Returning phone calls	5	17	6	20	>0.99
VA inconveniently located	4	13	5	17	>0.99
Admissions process	3	10	3	10	>0.99
Mail-in pharmacy[c]	2	7	5	17	0.42
Overwhelmed system impacting care	2	7	3	10	>0.99
Satisfaction codes					
Wide range of available services[c]	1	3	7	23	0.05
Prompt response to phone calls[c]	3	10	8	27	0.18
Navigating system	5	17	8	26	0.53
Inexpensive medical care/Veterans right to care	9	30	8	27	>0.99
Short wait time[c]	3	10	7	23	0.30
Scheduling system	6	20	7	23	>0.99
Electronic medical records, easy access[c]	2	7	5	17	0.42
Parking/valet parking	2	7	4	13	0.67
Follow-up care[c]	6	20	3	10	0.47
Mail-in pharmacy	3	10	2	7	>0.99
Adequacy of pain management					
Dissatisfaction codes					
Overly restrictive narcotics prescribing[c]	6	20	2	7	0.25
Pain management	5	17	5	17	>0.99
Narcotics seekers[c]	4	13	1	3	0.35
Feelings of Respect					
Dissatisfaction codes					
Felt stigmatized	5	17	1	3	0.19
Staff not respectful	12	40	13	43	>0.99

Table 2 (continued)

Domains of healthcare and codes of dissatisfaction and satisfaction	African Americans N=30		Whites N=30		p value[b]
	n	%	n	%	
Complaints not addressed	9	30	10	33	>0.99
Dissatisfaction codes (cont)					
Ignored patient decision making[c]	6	20	2	7	0.25
Dehumanizing medical care	2	7	4	13	0.67
Coordination of care					
Dissatisfaction codes					
Getting referrals[c]	9	30	3	10	0.10
Coordination between providers	8	27	7	23	>0.99
Role of race in VA healthcare					
Dissatisfaction codes					
Feelings of reverse discrimination leading to differential treatment	0	0	5	17	0.06
Differential treatment due to race[c]	6	20	1	3	0.10
Racial profiling[c]	6	20	1	3	0.10
Denied treatment due to race[c]	4	13	1	3	0.35

[a] Codes mentioned at least five times are listed in the table

[b] P values for race comparisons are from Fisher's exact tests

[c] Codes with at least 2-fold disparity in prevalence

> just put it in. I haven't had one, and I've been attending the VA off and on for 6, 7 years.

While Whites were in general more satisfied, there were examples where African Americans described the VA as a place where they could effectively receive care, as shared by one man praising the VA as a place where he was "able to just walk in at any time and not having to worry about-it's like a hassle-free environment."

Adequacy of Pain Management

Both Whites and African Americans noted dissatisfaction themes regarding the VA's approach to pain management. White participants frequently noted general problems with the delivery of pain medication, such as an overly lax approach to medications: "They give you pain pills like candy…. You could be an addict and go in there and get pain pills."

African Americans also noted general problems, plus the difficulty of gaining access to needed medications. An African American who sought pain medication for a broken jaw discussed his experience with getting prescriptions for narcotics:

> First word that came up was, well, you know, these can be sold as narcotics. And I wondered, why mention it to me? I can understand the mission, but why mention it to me as being a Black person.... And they said no, we're going to stop you and put you on these, and I said well, those won't really help me. But they said that these can't be administered as they are usually being sold. And I said, well, I'm not selling them, I'm using them for my pain.

Feelings of Respect

Similar to the domain of Adequacy of Pain Management, both Whites and African Americans expressed dissatisfaction themes related to a perceived lack of respect, particularly by non-medical staff. The statement of a White veteran shows such feelings consistent with disrespect:

> By healthcare providers, I've been treated with respect; by administrative personnel, not so…they socialize, don't pay attention to what's going on. They'll stand in the hallways and have a homecoming in the middle of the hallway and you have to walk around them.

One elderly African American described his concern with the way he was treated by VA police as he waited for his medical care:

> Some of the VA police, that's a different story….some of them is just outrageous….like "you sit up, you can't

> sleep here." You know, people waiting an hour, 2 h, you might doze off or something. They're shaking you.

Role of Race in VA Health Care

We sought to directly engage participants on whether they perceived race as important in receiving care in the VA Healthcare System. A similar pattern emerged as in the last two domains where there were greater similarities between Whites and African Americans. In this domain there was either a focus on concerns related to discrimination or expressions that veterans had shared experience that transcended race, making everyone equal. Focusing on discrimination, several White participants shared concerns that the VA system was prejudiced against veterans who were of the White race:

> African-Americans have priority in [names a VA site]. It's an African-American society. I am a minority…. I was checking into a medical clinic, and I sat down, and I saw a White man come in behind me to check in. He did not have his VA card. But he had his letter of appointment. They would not check him in because he did not have his VA card. They sent him to get a VA card first. After he left—and I'm sitting there—in walks a Black man, same situation, did not have a VA card, the lady said, "No problem, show me your letter of appointment." It was a Black lady talking to a Black man. Checked him in! And I've seen that time and time again.

African Americans also discussed concerns about the role of race within the healthcare system. For example, an African American male noted that he perceived frank racism within the system:

> For the most part with VA, dealing with Black, Hispanic, Latino, people of color, it seems to be if we go in there with a legitimate health reason…it's got to be some drug-related or some kind of unsavory kind of aspect that might cause your health to be that way… White veterans tend to be taken [as] more believable… it's a [form] of discrimination. It is not overt where you could just go and use the "N" word or anything, but it's discrimination.

In addition, both Whites and African Americans expressed the view that their veteran status helped transcend the role of race when it came to their VA care. A White man stated that: "I haven't seen race play a part in any healthcare situation at the VA. All veterans I think- especially American veterans- are considered the same race. We're Americans. We're American veterans." This same sentiment was shared by an African American who discussed race very specifically:

> You get Black, you get White, you get Native American, you get Latino. And I don't see it. I really don't. And we have to act like brothers because–especially the combat guys–whatever, because of that memory that you form when you were serving. Some of these guys served seven units in Vietnam.

Quantitative Satisfaction with Care Data

In addition to the qualitative data, the Likert scales related to patient satisfaction with VA care provided an overall snapshot of patients' views. Sixty-two percent of the combined veteran sample was completely/very satisfied with their overall care, 70 % was completely/very satisfied with their outpatient care, and 30 % was completely/very satisfied with their inpatient care. Focusing on race, about 50 % of African Americans and 74 % of Whites reported being completely/very satisfied with their overall VA care, and 57 % of African Americans and 84 % of Whites reported being completely/very satisfied with their outpatient care (Table 3). About 30 % of African Americans and 29 % of Whites reported being completely/very satisfied with their inpatient care. Compared to Whites, African Americans reported lower satisfaction with outpatient care (OR=0.28, 95 % CI 0.10–0.82). Satisfaction with inpatient care did not differ significantly by race. No significant departures from the proportional odds assumption were noted.

A Statistical Summary of Themes at the Domain Level

Based on random effects logistic models (Table 4) that summarize all of the themes in Table 2 by race, African Americans expressed satisfaction themes significantly less often than Whites in one of the three domains where satisfaction themes were coded: Trust/Confidence in Medical Providers and the Healthcare System (90 vs. 147 occurrences, respectively; OR=0.36, 95 % CI 0.18–0.73). No significant racial differences in dissatisfaction themes were observed based on the random effects models ($p>0.11$ for each, see Table 4). Significant heterogeneity by site was apparent only for dissatisfaction in the domains of Feelings of Respect and Trust/Confidence in Providers and the Healthcare System. No race by theme interactions were identified in any of the models considered in Table 4.

Discussion

In this three-site mixed methods pilot study, we found that 62 % of the combined sample was completely/very satisfied with their VA healthcare, with even more veterans expressing satisfaction with their outpatient care. This high level of

Table 3 Satisfaction with overall, outpatient, and inpatient care, by race

Level of satisfaction by type of care	African Americans *N*=30		Whites *N*=31		OR[a] (95 % CI)	*p* value
	n	%	*n*	%		
Overall care					0.38 (0.15, 1.00)	0.05
Completely satisfied	5	16.7	8	25.8		
Very satisfied	10	33.3	15	48.4		
Somewhat satisfied	7	23.3	0	0.0		
Not satisfied[b]	8	26.7	8	25.8		
	N=26		*N*=30			
Outpatient care					0.28 (0.10, 0.82)	0.02
Completely satisfied	4	15.4	12	40.0		
Very satisfied	13	50.0	14	46.7		
Somewhat satisfied	6	23.1	2	6.7		
Not satisfied[b]	3	11.5	2	6.7		
	N=17		*N*=15			
Inpatient care					0.72 (0.21, 2.56)	0.62
Completely satisfied	3	17.7	6	40.0		
Very satisfied	6	35.3	3	20.0		
Somewhat satisfied	6	35.3	2	13.3		
Not satisfied[b]	2	11.8	4	26.7		

[a] OR denotes an odds ratio estimated from an ordinal logistic regression model with main effects for race and site. The OR denotes the odds of higher satisfaction for African Americans relative to whites at each possible cut point of the satisfaction scale

[b] The aggregated response "Not satisfied" includes "Neither satisfied or dissatisfied," "Somewhat dissatisfied," "Very dissatisfied," and "Completely dissatisfied."

95% CI 95 % confidence interval

satisfaction is an important finding for our study. Yet while satisfaction was in general high, we identified differences by race. About 50 % percent of the African Americans and 74 % of Whites reported being completely/very satisfied with their VA healthcare overall, with 57 % of African Americans and 84 % of Whites expressing this level of satisfaction with their outpatient care. Consistent with this pattern, African Americans noted significantly fewer satisfaction themes regarding their Trust/Confidence in Medical Providers. While many studies report racial disparities in satisfaction with health care consistent with our own [15, 17, 20–29], others have reported no differences or even greater satisfaction among minority patients [20, 23, 28, 30–39].

Using detailed textual analyses, we were able to identify some underlying reasons for racial dissatisfaction with care. We found that poor trust in medical providers was an important issue for African Americans. These results are consistent with reports in the literature that African Americans were more likely than Whites to perceive institutional racism and to feel mistrustful of providers [2, 15, 17, 21, 23, 35, 39, 40]. In addition, some African Americans described stigmatization, harassment, and disrespect in the healthcare system. Stigmatization as a theme in our data is interesting, as most African Americans claimed that they saw no real role of race in the provision of VA health care. Yet when prompted to share any concerns with care, some African Americans noted experiences of racial profiling and perceived denial of treatment based on race. Concerns related to provider distrust, feelings of disrespect, and stigmatization suggests that perceptions of discrimination may have contributed to the racial differences in satisfaction with care. These observations are consistent with Benkert et al. [21] and Hicks et al. [16], which reported greater perceived racism among African Americans than among Whites. Our results also are strikingly similar to those by LaVeist, Nickerson, and Bowie [17], which found that while both African Americans and Whites failed to endorse the existence of institutional racism in the medical system, African Americans were more likely to report experiencing racism and feeling mistrustful of their healthcare system. These findings are important to the VA as African Americans now make up over 15 % of the total veteran population of 20 million. All minority groups together comprise close to 20 % of the veterans, making the tailoring of the system to address their needs imperative [10].

While the above studies show that disrespect and perceptions of discrimination are important, they represent constructs infrequently measured in patient satisfaction surveys. Harris-Haywood et al. [39] contend that discrimination is

Table 4 Statistical summary of racial differences in codes of satisfaction and dissatisfaction within domains of health care in terms of the odds ratio of an African American vs. a White veteran expressing satisfaction (dissatisfaction) themes within a domain

Codes of satisfaction and dissatisfaction by domain	Number of reported occurrences		Number of unique patients Reported		OR[a] (95 % CI)	*p* value
	African Americans	Whites	African Americans	Whites		
Trust/confidence in medical providers and healthcare system						
Dissatisfaction	158	126	26	25	1.40 (0.63, 3.09)	0.41
Satisfaction	90	147	27	30	0.36 (0.18, 0.73)	0.005
Communication with medical providers						
Dissatisfaction	39	59	14	22	0.37 (0.11, 1.29)	0.12
Satisfaction	73	115	23	25	0.40 (0.16, 1.00)	0.05
Access to medical care						
Dissatisfaction	149	151	29	29	0.91 (0.53, 1.57)	0.74
Satisfaction	49	72	20	25	0.61 (0.36, 1.04)	0.07
Adequacy of pain management						
Dissatisfaction	15	10	8	7	1.77 (0.35, 8.94)	0.49
Feelings of respect						
Dissatisfaction	38	34	18	17	1.25 (0.46, 3.35)	0.66
Coordination of care						
Dissatisfaction	17	10	13	9	2.26 (0.71, 7.23)	0.17
Role of race in VA healthcare						
Dissatisfaction	16	13	7	7	1.20 (0.22, 6.62)	0.84

[a] OR denotes odds ratios for an African American vs. a White veteran to express satisfaction (dissatisfaction) themes within a domain, based on random intercept models with main effects for race, site, and theme

95% CI 95 % confidence interval

inadequately assessed in most measures, despite being a critical factor in determining minority group satisfaction with care. Lee et al. [41] argue that patient satisfaction surveys inadequately capture patient concerns, which are needed to discern sources of dissatisfaction with care. Similarly, Coyle and Williams [42] note that patient satisfaction measures remain insensitive to disappointment, dissatisfaction, and other negative attitudes related to healthcare.

In order to better understand potential negative experiences, such as discrimination, we designed a complex investigation to explore racial disparities in satisfaction. We explicitly addressed the role of race in the provision of healthcare, and other topics found to be critical in the health disparities literature, such as trust in providers and the adequacy of pain management [20, 21, 25, 30, 32, 33]. We also gave participants limitless time to respond to questions; multiple studies have found that having adequate time to share concerns is important in capturing dissatisfaction with care [17, 32, 35, 43, 44].

Consistent with the call issued by Lurie et al. [32], we used complementary ways of measuring satisfaction. Our mixed methods approach had a conceptual advantage in that it used open-ended questions and parallel Likert scale items. In an exploratory analysis, we used statistical criteria to identify some potentially informative themes demonstrating racial differences in these data, and selected quotations related to these themes. The random effects modeling summarized the magnitude and consistency of racial differences across satisfaction (or dissatisfaction) themes within each domain. Both our quantitative and qualitative analyses of these pilot data indicate that African Americans as stakeholders appear to be less satisfied with some aspects of their VA health care than Whites. This approach also enabled us to identify sources of discontent that otherwise may have gone undetected. Such specific insights can be critical for formulating future interventions designed to improve the care for US veterans.

These perceptions can impact not only satisfaction with care, but have been found in the literature to impact adherence to care plans and the receipt of services [17]. Other studies have found that African Americans who believed that they would have received better treatment if they were a member of a different racial group were significantly more likely to delay medical care and to disregard a provider's advice [21, 45]. In addition, these studies found that the participants were less likely to receive optimal chronic disease screening.

Our finding of lower levels of satisfaction with outpatient care among African Americans are consistent with the VA report that revealed racial differences in satisfaction with care at the VA [14] and other studies of veterans [46–48]. Based on such findings, the VA leadership has taken a proactive

approach to understanding the underlying reasons for these differences. The VA has funded our ongoing study based on these preliminary data to assess satisfaction with care among 1,400 African American, White, and Latino veterans receiving care at 25 VA sites nationally. This ongoing study is designed to provide further insight into the sources of racial and ethnic differences in satisfaction with VA care and to inform future interventions. The VA also established the Office of Health Equity to assure that racial and ethnic differences in areas such as satisfaction with care are addressed in a systematic way.

The present pilot study is not without limitations. First, it focuses on differences in satisfaction between African Americans and Whites and does not include other racial or ethnic minorities, a limitation that will be addressed in our ongoing study. Second, the small sample size limits our ability to detect differences in satisfaction or dissatisfaction with care in several domains of interest. Third, some observed differences could be attributable to factors associated with demographic (e.g., age, level of education) or other differences between the groups. The larger ongoing study will enable us to more definitively examine the associations of these factors with satisfaction. Fourth, given the large number of statistical comparisons being made, the probability of type I error is likely higher than the nominal 0.05 used to select the themes in the qualitative analysis; however, regardless of statistical significance, this approach identified the themes with the largest differences based on this statistical measure. We do not claim statistical significance at the 0.05 level, but instead use it as a guide. Fifth, this study focuses on the satisfaction of patients with their VA healthcare within the US, and the results may not generalize to non-VA settings or to other countries.

Finally, in this study, less specificity emerged about reasons for satisfaction with care as praise tended to fall into more homogenous categories, e.g., liking a primary care provider or praising the quality of the doctors. The succinctness of praise made it difficult to code the satisfaction statements in the domains of Adequacy of Pain Management, Feelings of Respect, and the Role of Race in VA Health Care as few comments expressed more than general satisfaction.

In summary, the current pilot study demonstrates racial differences in satisfaction with outpatient care and identifies some specific sources of dissatisfaction. A multi-faceted mixed methods approach allowed us to assess racial differences in satisfaction with specific aspects of VA health care that could inform system improvements.

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Conflict of Interest All authors declare that they have no competing interests.

Ethical Standard All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all patients for being included in the study.

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