

“We get double slammed!”: Healthcare experiences of perceived discrimination among low-income African-American women

Women's Health
Volume 16: 1–12
© The Author(s) 2020
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/1745506520953348
journals.sagepub.com/home/whe



Olihe N Okoro¹ , Lisa A Hillman² and Alina Cernasev³

Abstract

Background: On account of their racial/ethnic minority status, class, and gender, African-American women of low socioeconomic status are among the least privileged, underserved, and most marginalized groups in the United States. Generally, African Americans continue to experience poorer health outcomes, in which disparities have been attributed to socioeconomic inequities and structural racism. This objective of this study was to explore the lived experiences of low-income African-American women in interacting with the healthcare system and healthcare providers.

Methods: Twenty-two in-depth one-on-one interviews were conducted with low-income African-American women. The audio-recorded interviews were transcribed verbatim. An inductive content analysis was performed, using an analytical software, Dedoose[®] to enabled hierarchical coding. Codes were grouped into categories which were further analyzed for similarities that led to the emergence of themes.

Results: A key finding was the experience of discriminatory treatment. The three themes that emerged relevant to this category were (1) perceived discrimination based on race/ethnicity, (2) perceived discrimination based on socioeconomic status, and (3) stereotypical assumptions such as drug-seeking and having sexually transmitted diseases.

Conclusion and Recommendations: Low-income African-American women experience less than satisfactory patient care, where participants attribute to their experience of being stereotyped and their perception of discrimination in the healthcare system and from providers. Patients' experiences within the healthcare system have implications for their healthcare-seeking behaviors and treatment outcomes. Healthcare personnel and providers need to be more aware of the potential for implicit bias toward this population. Healthcare workforce training on culturally responsive patient care approaches and more community engagement will help providers better understand the context of patients from this population and more effectively meet their healthcare needs.

Keywords

African-American women, health disparities, healthcare, insurance, low-income, perceived discrimination, provider

Date received: 1 July 2019; revised: 27 May 2020; accepted: 20 July 2020

Background

Minnesota is ranked as one of the healthiest states in the United States.¹ However, the state also has some of the widest gaps in health status and health outcomes.² Populations that are most affected include females, persons of color, those who are economically disadvantaged, and those living in more rural communities.³ Studies show that social roles of race/ethnicity, socioeconomic status (SES), and gender as adopted and reinforced by both individuals and society, exert chronic psychosocial stress that has the capacity to alter physiological functions.^{4–6}

¹Department of Pharmacy Practice and Pharmaceutical Sciences, College of Pharmacy, University of Minnesota, Duluth, MN, USA

²Department of Pharmaceutical Care and Health Systems, College of Pharmacy, University of Minnesota, Minneapolis, MN, USA

³College of Pharmacy, The University of Tennessee Health Science Center, Nashville, TN, USA

Corresponding author:

Olihe N Okoro, Department of Pharmacy Practice and Pharmaceutical Sciences, College of Pharmacy, University of Minnesota, 232 Life Sciences, 1110 Kirby Drive, College of Pharmacy, Duluth, MN 55812-3003, USA.

Email: ookoro@d.umn.edu



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

African-American (AA) women with socioeconomic disadvantage are, therefore, at substantial risk of associated chronic conditions such as cardiovascular disease (CVD—e.g. hypertension, stroke, congestive heart failure, and coronary heart disease) and diabetes, with poorer outcomes. Data show that AA women have the highest burden of CVD, which is the leading cause of death in this population.^{7,8} Compared to White women (25.6%) and Hispanic women (28.0%), AA women have a higher prevalence of hypertension (39.9%).⁹ Rates of diagnosed diabetes are also higher among AA women (12.0%) compared to White women (6.6%), Hispanic women (11.6%), and even AA men (11.4%).¹⁰

Low-income AA women are less likely to be engaged in regular care for a variety of reasons, including challenges associated with access to care.¹¹ In Minnesota, 95.6% of Black/AA women have insurance coverage.¹¹ However, since Blacks/AAs constitute a significantly small proportion (estimated at 6.8%)¹² of the population when AA women seek healthcare, they are likely to interact with a provider of dissimilar racial/ethnic background. Prior research has shown that patient–provider concordance is associated with quality of care, patient satisfaction with care, intention to adhere to treatment, and persistence with care.^{13–15} According to workforce trends in Minnesota, the majority of healthcare providers are White. In a 2016 workforce survey, only 2.4% of Minnesota licensed physicians who responded to the item on race/ethnicity was self-identified as Black.¹⁶ In the Northeast where this study was conducted, there are even fewer licensed physicians who were identified as Black (1.6%).¹⁶ With the lack of diversity and inadequate representation in the healthcare workforce, we hypothesized that the healthcare setting could potentially be another space where AA women are acutely aware of the disempowering reality of their racial minority status, gender, and socioeconomic disadvantage. Such experiences inside and outside the healthcare system ultimately result in further adverse health effects and thus necessitate further investigation.¹⁷

The long-standing history of structural racism and other inequities are reported as contributing one to the health inequities in Minnesota.² These have invariably created some distrust of the healthcare system in the AA population. In addition, AA women in Minnesota are more likely to live in poverty compared to White and Hispanic women.¹⁸ Therefore, race/ethnicity, gender, and SES as key social determinants of health and their intersection in the aforementioned historical context must be taken into account in investigating and addressing the persisting health disparities that adversely impact AA women.

To design healthcare interventions that will result in equitable care and health outcomes for low-income AA women, we began with an understanding of their current healthcare-related experiences. The purpose of this exploratory study was to understand the healthcare-related experiences of low-income AA women living in a semi-urban

town with a predominantly White population. The specific objectives of the study were to (i) gain insight into the experiences of low-income AA women in their interactions within the healthcare system, (ii) assess their patient satisfaction with care, and (iii) identify ways of enhancing their healthcare-related experiences. In this report, we highlight their lived experiences of discrimination. Approval for the study was duly obtained from the University of Minnesota, Institutional Review Board.

Methods

This investigation was conducted using a mixed-methods approach. To assess patient satisfaction with their primary care physician, a modified version of the short-form patient satisfaction questionnaire (PSQ-18)¹⁹ was used to survey a convenience sample of 95 low-income AA women. Respondents were recruited using flyers at community spaces in neighborhoods with a high prevalence of AA residents (e.g. grocery store, park, housing office) and during community events. As the survey was administered, respondents were then recruited for the interviews that informed the findings in this report. Survey respondents were asked if they would like to participate in an interview. If the response was in the affirmative, a date, time, and venue were scheduled for the interview. To be included in the study, the participant had to self-identify as an AA female, be 18 years or older (by self-report), be a current beneficiary of at least one government-assisted (or other) program for persons of low-income, and report utilizing healthcare services in the Twin Ports area of Minnesota within the previous 6 months. The programs certifying low-income eligibility included the Minnesota Family Investment Program (MFIP), Section Eight Public Housing, a not-for-profit housing service for families with children who had experienced long-term or recurrent homelessness, and Lifeline (a subsidizes phone service for low-income consumers).

Data collection

In-depth, one-on-one interviews were conducted with consenting survey respondents until saturation (when no new information was forthcoming) occurred. Interview sessions lasted between 30 and 60 min and were in private spaces in a community center and the facility of a community-based organization. A total of 22 women were interviewed. The AA community in the study area being relatively small (>3% of the population), a broader perspective from a community standpoint was obtained via two focus group discussions (FGDs) with 11 community leaders and/or advocates (three men and eight women). The FGD participants were identified by and recruited through the help of the local branch of the National Association for the Advancement of Colored People (NAACP), a nationwide civil rights organization. All the interviews and focus groups were audio-recorded.

The interviews were conducted by two investigators using a structured guide. The questions were open-ended and addressed three broad categories—(1) *participant's general experience with the healthcare system as a whole and with individual providers*; (2) *patient satisfaction with care*, and (3) *recommendations on how healthcare for low-income AA women could be improved*. The same questions for the interviews were adapted for the FGDs. However, the focus was on a collective perspective versus individual experiences. Each interview and FGD participant was compensated with a \$40 gift card.

Data analysis

The audio-recordings of the interviews and FGDs were transcribed verbatim. Using an inductive process, the transcripts were analyzed for themes. Three investigators independently developed initial codes from three transcripts and met to compare and reconcile codes. By mutual agreement, descriptors for each code were generated to guide subsequent coding of the remaining transcripts. When an investigator encountered an excerpt to which none of the previously developed codes was applicable, they developed a new code and brought it forth for discussion and agreement during the weekly research meetings. Coding was hierarchical, with some root codes having sublevels of codes (branches) that reflected different dimensions of the code.

Working independently, each of the three investigators reviewed excerpts for each code to ensure congruence with assigned code. More conceptual coding using interpretive theme phrases and sentences to explain and describe specific aspects of the coded data followed the initial coding. The investigators compared analytical notes and agreed on the conceptual codes derived from the initial codes. Based on relatedness and similarities, the conceptual codes were grouped together into categories. With further inductive analysis, several themes emerged from each category. This report highlights the themes specifically associated with “*perceived discrimination*” as this was commonly reported by most of the participants. Data analysis was aided by the use of analytical software—Dedoose[®]. The software was helpful in facilitating ease of coding, categorization, and retrieval of sample quotes. It also provided a web-based platform accessible to all investigators and enabling them to work on the data at the same time.

Results

There were three categories of themes associated with perceived discrimination:

1. Perceived discrimination based on race/ethnicity:
 - Not making physical contact
 - Differential in care approach

2. Perceived discrimination based on income level and insurance type
 - Differential in access and treatment
 - Intersectionality of race and SES
3. Stereotypical assumptions.
 - Drug-seeking
 - Having a sexually transmitted disease (STD)
 - Perceived as not caring about health and/or uneducated/uncouth

Theme #1: perceived discrimination based on race/ethnicity

Many of the participants reported discriminatory treatment from both non-clinical staff and healthcare providers that they believed was based on their presentation as an AA woman. The two ways in which this type of discrimination was reportedly experienced including (i) providers appearing to avoid making physical contact and (ii) difference in care approach compared to treatment observed with patients of the majority population.

Not making physical contact

Some of the participants reported experiences of healthcare providers who seemingly shrunk back from making physical contact with them. They attributed this perceived attitude to the providers' perception of the colored skin as perhaps being dirty or the provider simply not being accepting of persons of color. One of the participants reported that she countered this perceived attitude of not wanting to make physical contact by putting up the same attitude herself.

I see the same way, where they don't even wanna touch you. They put stuff down like this [demonstrates] instead of giving it to you in your hand. You know what? When they try to give me stuff and I know that person, you know what I do? I tell 'em to put it down. Because I have feelings just like you do. If you wanna act like that, I can act like it, too. You don't wanna touch me, I don't wanna touch you. You know what I'm sayin'?' (Participant #5)

Differential in care approach

Participants commonly expressed the sentiment that healthcare providers were not always responsive to their individual patient needs. They reported that often times, healthcare providers did not consider the symptoms with which they presented to be as severe as they experienced and described them. Therefore, providers sometimes did not adequately treat the condition (pain, for example) or did not treat with the needed urgency. This resulted in care that did not effectively address their healthcare needs.

They treat you different, even with the way they greet you. . . . because you African-American. You do get treated a little bit different, because they don't even have the compassion a lot of times to Afro Americans. They don't consider that a lot of things is serious with us when it is—(Participant #2)

Some of the participants talked about differences they observed regarding treatment they received from health-care staff and providers versus what they observed with their White counterparts. They believed that the providers were not as patient, caring in their attitude, or as responsive to their patient care needs as they could otherwise be. Participants also described scenarios where they had felt the healthcare provider was not as empathetic or compassionate toward them compared to how they observed them treat persons from the majority population.

I'm not gonna say like it's a racist thing, but I could tell that they treat their own kind better than they do us, period. Because of the fact of I've been to emergency rooms plenty of times for dislocated shoulders and being sick or being pregnant, and it's like they just give me any type'a answer, or just give me any type'a thing just to get me outta there. (Participant #12)

Black people can tell when we're bein'—when there's a negative thing cuz I guess after you been treated wrong so long, you're tuned into it. You can just tell sarcasm. You can tell wrong treatment . . . (Participant #2)

For some of the women, the perception of racial discrimination influenced their health-seeking behaviors. There was hesitance to follow-up with appointments and efforts to minimize frequency of interaction with the healthcare system especially following episodes of perceived racial discrimination.

I ended up leaving. I didn't even go to see the doctor that day. I think I didn't never go see—I have high cholesterol. I was really trying to check on my cholesterol cuz that's an important thing for me. I just didn't even go. I just said, nope. Why put up with that kind of shit again? I'm not going. I just—and I be trying to irritate them by not going, but I'm really hurting myself. (Participant #2)

For some, it was the anticipation of discrimination that influenced their health-seeking behavior.

I thought about not going to that dentist office anymore because when we go there I feel we're stared at. It's super uncomfortable in there. I called it, "We're ink on paper." We are the spot on paper, ink on paper. That's how I feel when I go in there with all the white people around. 'I was gonna stop going because of the stares, because of the feeling I have because I'm in there telling my kids, "Be still. Don't do anything." Even though all these little white kids are running around. "Don't you stand up, don't you move because we will be looked at. You will destroy it. If something is broke, it will

be because of you. If you are there and it's over there, it'll be because of you." I do that with my kids. That's not right, so I stopped. (Participant #4)

Theme #2: perceived discrimination based on income level and insurance type

The participants in the study reported that they experienced discrimination because of their low-income status and the consequent dependence on government-assisted insurance. The discrimination was reportedly on two levels: structurally (differential in access to healthcare) and individually (differential in treatment). The cumulative impact of discriminatory treatment based on the intersectionality of race and socioeconomic disadvantage was also emphasized.

Differential access and treatment

There were reports that presenting with government-assisted insurance at healthcare facilities (which gave away their low-income status) elicited treatment from both administrative and clinical personnel perceived to be different from that given to persons with work-based insurance. There were also reports of facilities that did not take government-assisted insurance. Participants particularly noted that rejection of insurance type was often accompanied by a less than courteous tone and attitude from the front desk personnel.

It's the looks like when you present what you have. They get the [disapproving sigh] like so over it and that is so discouraging cuz you don't have another way sometimes. You can't afford another way and it makes you feel bad, but I had a cardiologist there. She just seemed disconnected like she had other things to do—more important things or more important people. They treat you like it's on a scale of what you got and that's not cool because you can feel it as the patient. (Participant #8)

Participants reported that treatment was sometimes dismissive and laden with skepticism of patient-reported symptoms. One of the participants generally described the experience of having the severity of her symptoms minimized and attributed this to low SES as evidenced by the insurance type.

If you have a certain kind of insurance, like Medicaid or state insurance, —or whatever it is, the doctors treat you differently. They're not—they're more apt to kinda overlook what's going on with you. They're more apt to say, Maybe you're exaggerating your symptoms a little bit. (Participant #10)

Another participant described what they perceived as a change in attitude of the front desk personnel when they

presented their insurance. She also attributed the perceived attitude of some of the providers to classism.

I say Medica, and they say what type a Medica? I said Medica through the government, and they said, oh, okay. Then it's like whole attitudes change. It's like they're slowing down, waiting a little longer now. I'm like, wow, they're just doing that because I'm on assistance. Half of these doctors don't wanna pay attention to the patients. They look at certain people like people that's in poverty, you get the dirtiest look from doctors and nurses. Doctors look at people living in poverty like they crazy. (Participant #12)

The experiences of perceived discrimination based on low SES as evidenced by their insurance type also influenced health-seeking and medication adherence for these women.

A lot of people don't have none, no Medicare. I'm grateful for what I have. I'm just—I'm not gonna kiss ass for what I have or feel belittled because they giving me this. I'm gonna get it and receive it because I'm a human being. I need it. I'm not able to afford this. That's what I appreciate about that. I'm grateful for that part. When you gotta kiss ass and go through hoops to hoops to see a doctor or get to one, it makes you don't even want the s**t. (Participant #2)

Intersectionality of race and SES

The women interviewed in the study believed that being of low-income status put an additional layer on how they were perceived within the healthcare system. The prevalent perception was that even among persons of low income with similar insurance type, persons of the majority population received better treatment compared to persons of color.

. . . it's just we get hit a lot harder just because of our color. —Yes, we get double slammed. We ain't the only poor people in America. Yet we get hit doubly. We poor and Black, . . . (Participant #1)

In anticipation of discriminatory treatment, some of the participants said they had become intentional about projecting a self-image to counter the perceived stereotype of the low-income AA woman. They reported paying attention to their appearance and making effort to not speaking in the AA vernacular.

. . . they'll treat me like crap because of the way they see me right now. I feel like I'd have to go home, do my hair, go do this. Why do I got to do this? As long as I'm clean, I'm not smelling, do your job. (Participant #3)

When I go, I try to present myself a little bit better, because I don't want them to judge me—(Participant #5)

Theme #3: stereotypical assumptions

Participants talked about some assumptions they believed staff in healthcare facilities and healthcare providers made about them. Some of these stereotypical assumptions included being perceived as drug-seeking, having an STD, being uneducated and uncouth, and having an uncaring attitude about their health.

Drug-seeking—The women reported that some healthcare providers engaged with them on the assumption that they were trying to get narcotics.

Then some places, they'll automatically assume that you are drug seeking, and they all say, “Well, we're not gonna do this for you off the top,” before they even know what your issue is. That's stories I've heard. Yeah. (Participants #7)

One of the participants talked about her experience as a patient with a prescription history showing her legitimate need and use of a medication classified as a scheduled substance. Even with her medical records, she felt she was always being interrogated and considered as drug-seeking.

If it's a scheduled prescription, you're treated like a flat out drug addict. I was born and raised [here] . . . —, my records are all at [mentions facility] . . . It's very much in it that I'm not a seeker. I don't need to be treated as one because I wasn't that at 20, 25, 27, 30 and now here I am, 32, and I'm still not that. (Participant #4)

The women believed that the providers' perception of AA women as drug-seeking contributed to providers' skepticism of patient-reported severity of symptoms when they presented at the clinic. The participants reported that this sometimes resulted in suboptimal treatment of severe pain.

I've seen them doubt me over—they didn't doubt this person, so why doubt me—. I always attribute it to drugs even. “Are you tryin' to do this because I'm Black and you think I'm drug seeking because I'm Black? The drug seeking thing is one thing that I can say that, “You're doin' that because I'm Black.” That's a definite thing. (Participant #4)

Have STD—Another stereotype that the women said they commonly experienced was providers' assumption that they had an STD. There were reports of being given treatment for STDs even when presenting with unrelated symptoms.

Right. For instance, my experience, honestly with this, even if I've had cramps or even if I had a yeast infection or anything like that, they would automatically assume I had an STD. I've even had a certain case where a doctor prescribed me medication for chlamydia before the test—if you're a Black

woman and you go to the doctor with any type of stomach pain at all, they're automatically gonna assume it's an STD, no matter what. (Participant #7)

You wait for hours in the urgent care room. The first thing they do is test you to see if you have a venereal disease. They don't test you for what you were in there for. We ran all of these tests and blah, blah, blah. (FGD1 female participant)

Perceived as not caring about health and/or uneducated

Some participants felt that they were judged and labeled based on their appearance, how they spoke and how they dressed. One of the assumptions the women mentioned included being perceived as not caring about their health particularly because of their weight.

I think that they definitely don't care about me because I'm Black. I think they assume that I'm gonna be unhealthy, that I don't know about kale or quinoa because I'm Black. —it became harder for me to find a doctor, general practitioner. Because I needed somebody that wasn't going to judge me or that wasn't going to make me feel some type of way—because of my weight or because of my look or my hair— (Participant #4)

From the narratives, there was also the perception of being considered uneducated and perhaps uncouth because of their manner of speech which included dimensions like having an accent, loud tone of voice and speaking in the AA vernacular. They also mentioned feeling that they were treated poorly because providers made negative attributions to how they chose to express themselves through their dressing, hair, and nails.

There's different instances where people would just judge you right away. They could have even a higher degree than them and just assume that they're the worst people. —[Are they **treated differently?**] Absolutely. Absolutely. Because of the color of their hair, because of how long their nails are, because of how they're dressed, the way they talk, if they have accent, if they talk loud, yeah. (Participant #7)

With respect to the impact of these stereotypes on their care-seeking behavior, some of the women interviewed said they paid attention to how they looked when going in for a clinic appointment. They took care to dress up and have their hair done. Ironically, the attention to appearance was then thought to contribute to providers minimizing the severity of the symptoms with which they presented.

I went in there with my hair combed and everything, and she clearly judged me. She told me that I was not hurting and that, "You ain't getting no pills here," and slammed that paper down. (Participants #21)

These experiences appeared to heighten the participants' awareness of their minority status, which made healthcare experiences less than satisfactory and for most of them quite stressful. These experiences were reportedly not limited to the healthcare space.

The resistance, that's the way I describe goin' to the doctor's office. If you're in between two counters and you're makin' it through 'cause you're sliding through, but you feel that point where it's like, "Oh my goodness, this is tight." Then you get through, and then you're free. That's the way I'd describe goin' through. —I have never told anybody that. That's the way I'd describe a lot of the places growin' up here. (Participant #4)

Perceived judgment from personnel and providers in the healthcare had impact on health-seeking behavior.

That's why I quit going to see them so much like I used to. You get irritated with the way they treat you and the way they look at. You feel like they're judging you.

Participants' recommendations

In response to the question of how healthcare can be improved for low AA women, there were specific recommendations made by the participants on how to address the perceived discriminatory treatment and stereotypes they experienced. They gave advice on how healthcare personnel and providers in the healthcare system should engage, interact with, and provide care to patients, in general and AA women, in particular. These included the following:

Treat each person with respect and empathy

A common message that the women wanted to pass across to healthcare personnel and providers was that everyone was deserving of respect regardless of one's racial/ethnic background or SES.

One thing that's very important is, especially the people of color, is respect. We wanna feel appreciated. We don't wanna feel like nobody's burden. That's what keeps people from going to the doctor. If it's not the over-elated hospital jargon that they try to ball you down with, hopin' you ain't educated enough—(Participant #17)

I would tell them exactly this. You know what? You can get more out of a person if you treat them with dignity, respect. You listen, and don't be so judgmental. You will get further. Now that's what I would tell me. (Participant #5)

Take time to build provider–patient relationship

They acknowledged that while providers may be of a different racial/ethnic background, a good patient–provider relationship could be established. According to the

participants, providers should acknowledge their lack of knowledge, ask questions, and listen attentively to better understand the AA patient's culture and context. One of the participants gave an example of the relationship-building that happened over time with her therapist.

It was when he said, "I don't know what that's like. I know that you know I'm a White man. I also work, my life, my living, is dealing with these type of issues too. It helps that when I go in there, I'm able to say it, address it, and he's like, "I'm one of those White people that don't get it—" Sometimes he says that when I come there, he's getting therapy. At first it wasn't like that. We built up to that through conversation and through time. (Participant #4)

The participants pointed out that the stereotypes and assumptions that providers made were obstructive to the goals of patient care.

Reach out to and engage with the community

One of the suggestions from the women on how providers can become more culturally aware and debunk the stereotypes included asking questions when they do not know or understand the cultural context rather than making assumptions. According to one of the participants, an effective way to do this was to have forums where healthcare providers can engage with the women in the community and have some dialogue to gain better understanding of their context and culture.

—if there was a group for African-American women because we do deal with things differently in our body than other women and their body, so maybe if there was a support group or a group where there was an open forum. Maybe a doctor can come in, and we can openly talk about things or maybe even some of the staff can come in, so we can understand each other more. Get the stereotypes are out the way and to get to a human level if that makes any sense . . . (Participant #8)

Discussion

Perceived racial/ethnic discrimination

In this study, participants commonly reported that they had experienced discrimination in the healthcare system from non-clinical staff as well as healthcare providers. In their perception, most of the discrimination they experienced was based on their race/ethnicity. For these participants, the experiences of perceived discrimination often influenced their healthcare-seeking behaviors thereafter and had some impact on treatment adherence.

In its 2003 landmark report, *Unequal Treatment: Confronting Racial/ethnic Disparities in Healthcare*, the Institute of Medicine (IOM) concluded that differential in quality of care given to patients from racial/ethnic, minority populations contributed significantly to health disparities²⁰

Over the years, patient-reported discrimination in the healthcare system has declined nationally, including for Blacks.²¹ However, Black persons continue to report race as the most common reason for discrimination.²¹

Historically, the interaction of AA women with the healthcare system has been characterized by racism at the structural and individual levels,²² resulting in inadequate healthcare, suboptimal treatment, and often times preventable adverse outcomes.^{23–25} The additional layers of socioeconomic disadvantage, historical trauma, and ongoing experiences of micro-aggressions make AA women one of the most vulnerable groups with regards to health.^{26,27} Several studies have demonstrated evidence of implicit racial/ethnic bias against AA women by healthcare providers.^{25,28,29}

Racial/ethnic discrimination resulting from implicit bias has been shown to have significant impact on provider communication, patient perception of care, and health outcomes for persons of color.^{30–32} While there is mixed evidence on the impact of healthcare provider implicit bias on health outcomes,³³ some studies have demonstrated the influence of healthcare provider implicit bias on clinical assessment, decision-making, and treatment recommendations for Black women³⁴ Implicit bias among healthcare providers has also been associated with lower quality of care.³⁵ All of these suggest that discrimination, whether explicit or implicit, contributes significantly to the health disparities that AA women continue to experience.

Perceived insurance-based discrimination

A common observation from participants interviewed was the perceived difference in attitude from non-clinic personnel at the front desk and care approach from healthcare providers. Participants attributed the perceived poorer quality of treatment to their low SES evident at the presentation of their insurance information. The study participants were all of low SES, and most of them were not in full-time employment and thus had government-assisted insurance (see Table 1). Insurance type is typically correlated with employment status and income level. Studies have established the existence of insurance-based discrimination in the healthcare delivery.^{36,37} This is when patients receive differential, unfair treatment from healthcare providers because of the type of insurance they have—usually government-assisted—or lack of insurance.^{38,39} In a qualitative study by Tajeu and colleagues,⁴⁰ focus groups stratified by race and gender were conducted with AA and White patients. SES and race were the key characteristics associated with perceived discrimination from non-clinical healthcare personnel.

Participants also pointed out that while having health insurance was intended to facilitate access to needed care, it was actually perceived as discriminatory in that regard. For example, participants were quick to point out that not

Table 1. Demographic characteristics of survey participants (n=95).

	Frequency (%)
<i>Age category</i>	
<20 years old	4 (4.2)
20–29 years old	39 (41.1)
30–39 years old	18 (18.9)
40–49 years old	10 (10.5)
50–59 years old	14 (14.7)
≥60 years and above	4 (4.2)
No response	6 (6.3)
<i>Education</i>	
No education	4 (4.2)
High school or less	43 (45.3)
College education or more	40 (42.1)
Other (trade school, GED)	2(2.1)
No response	6 (6.3)
<i>Employment status</i>	
Unemployed	25 (26.3)
Employed (part-time)	27 (28.4)
Employed (full-time)	25 (26.3)
Self-employed	5 (5.3)
Other	7 (7.4)
No response	6 (6.3)
<i>Health insurance</i>	
Employment-based	6 (6.3)
Government-assisted [only; plus other]	63 (66.3)
Privately purchased	4 (4.2)
Other	2 (2.1)
None	11 (11.6)
No response	9 (9.5)

GED: graduate equivalency degree.

Interview participants were a subset (n=22).

all providers accepted patients that have government-assisted insurance, thus limiting access for these women. The unwillingness of some providers to accept these patients is driven largely by low reimbursement rates.⁴¹ However, there are other contributory factors such as wait time for reimbursement, time-consuming paperwork, and complexity of patient needs in this population.⁴¹ With the implementation of the Affordable Care Act which expanded insurance coverage for the poor and increased reimbursement, more providers are now accepting patients on government-assisted insurance, but there are differences across states and specialties.^{42,43} Our findings thus highlight the discrimination at the structural level in healthcare access for low-income AA women even when they have insurance coverage.

Intersectionality of race and socioeconomic disadvantage

In addition to limited access to care, there is evidence that persons with no insurance or government-assisted

insurance receive lower quality of care compared to those with employer-based or private health insurance.^{44–46} While insurance-related challenges to healthcare access and quality of care commonly affect all persons of low SES regardless of race/ethnicity, findings from this study suggest an added layer of discriminatory treatment based on the intersection of race and SES. In their investigation, Van Ryn and Burke⁴⁷ reported that healthcare provider perceptions tended to be more negative for AA patients and patients of lower income status compared to White patients and those of upper income status. In efforts to eliminate health disparities, the perceived discrimination at the intersection of race/ethnicity and SES should be addressed particularly in the contexts of healthcare access and patient care delivery in low-income AA women.

Stereotypical assumptions

Accounts of personal experiences by participants in this study indicate that provider bias still persists in healthcare delivery. There are stereotypes that have been associated with provider bias toward AA women that lead to differential treatment and result in racial/ethnic disparities in healthcare outcomes. One stereotype is the notion that AAs are drug-seeking. Given the current opioid crisis, there is increasing effort toward more appropriate prescribing. However, studies have shown that compared to the majority White population, non-Hispanic Blacks are still less likely to receive opioids for pain for similar conditions.^{48,49} Reasons include provider perceptions of less severity of pain among Blacks and the implicit assumption of drug-seeking behavior. This differential treatment is reported in the literature as resulting in under-treatment of pain particularly for AA women.^{50,51}

In addition to the association with pain management, this study findings suggest that this stereotypical assumption are made even when AA women come in for non-pain related complaints. This perceived attitude from providers may deter AA women from seeking healthcare when needed and adhering to treatment, as it fosters the distrust of the healthcare system.⁵² This could potentially contribute to late-stage diagnoses of numerous diseases and poor health outcomes in AA women.

Another stereotype that participants talked about was the assumption of having an STD even when they presented with symptoms unrelated to an STD. This reported behavior by clinicians is described in the literature as statistical discrimination which “generally refers to the phenomenon of a decision-maker using observable characteristics of individuals as a proxy for unobservable, but outcome-relevant, characteristics.”⁵³ In essence, a known characteristic associated with a specific population becomes a significant factor in treatment decision for an individual patient when there is no indication that the said characteristic is applicable to the specific individual patient. This phenomenon is

well-documented in clinical decision-making and outcomes for AAs in various medical conditions.^{54,55}

Provider perceptions regarding STDs in this population may be driven by both national and state data, which indicate a persistently higher incidence rate and prevalence of STDs among AA women compared to their White counterparts.^{56,57} There is also strong correlation of sexual health status with socioeconomic characteristics such as unemployment, poverty and low educational attainment.⁵⁸ In the United States, poverty rates (proportion of the population living under the poverty line) are highest among AAs, with Minnesota having one of the widest socioeconomic gaps between Blacks and Whites. While this may put members of this priority population (low-income AA women) at substantial risk for STDs, this should never be grounds for stereotypical assumptions.⁵⁹ Healthcare providers are bound by the ethics of their profession to provide individualized patient care and should adhere to standard protocol for diagnosis and treatment when treating AA women or any other population.

In this study, participants reported that cues associated with stereotypes in healthcare settings included patient's speech and appearance. Many AAs speak with distinct phonological characteristics—tones, cadences, and pronunciations.^{60,61} While AAs have a vernacular dialect known as AA English, members of the population who are educated can and do speak what is recognized as the standard English grammar. However, many AAs even in speaking grammatically correct English do so with phonological features, intonations, and lexical items, which are unique to the AA vernacular.⁶² This produces what is often recognizable as the AA accent. This linguistic pattern is very often perceived as an indicator of poor education and has been shown to elicit an unconscious undesirability in others.^{55,60} Training to address provider implicit bias in this regard should be considered in educating healthcare providers, particularly those with limited life experiences interacting with minority populations.

The AA woman has been historically stereotyped as being lazy and sexually promiscuous.⁶³ Being on government assistance, a clear indication of low SES appears to further perpetuate this stereotype, thus making low-income AA women particularly vulnerable to discriminatory behaviors from healthcare personnel and providers. Also, AAs have historically been perceived by providers as “non-compliant” with treatment recommendations and, therefore, careless about their health.⁶⁴ Findings from this study suggest that these stereotypes continue to be pervasive in the society including healthcare settings. The cognitive processing implicated in stereotypes is often unintentional, subconscious, and usually triggered by situational cues, such as skin color, hence the descriptor implicit bias.^{65,66} Implicit bias in healthcare settings have been associated with racial/ethnic health disparities.^{18–24,30–32,65–69} Discriminatory behaviors based on these

implicit biases can only be altered when good-intentioned persons are made aware of these biases and trained on how to actively counter their influence as they interact with this and other vulnerable populations.

Key recommendations

1. *Training for culturally responsive and individualized, patient-centered care:* Participants were very vocal about their perception of being treated as an individual with characteristics that may differ from other persons with same racial/ethnic background. Patient-centered care calls for treatment of patients as individuals versus working with the assumption that a population statistic is applicable to all members. Because this operates in the subconscious, appropriate training is required to help healthcare providers identify and acknowledge their implicit biases. Only then are healthcare providers able to mitigate the effect that these have on their interaction with patients, including decision-making. Healthcare providers have an obligation to provide high quality and effective care to patients regardless of the patient's gender, race/ethnicity, or SES. Providers need to care for low-income AA female patients simply as people who are equally deserving of respect. Care that demonstrates respect is clearly an expectation from members of this population.
2. *Establishing strong provider–patient relationships:* The respondents in this study acknowledge the differences that exist between providers and patients from different cultural and socioeconomic backgrounds. They recommended taking time to establish a relationship that then becomes the foundation for the delivery of more responsive care. The literature is replete with evidence that an established provider–patient relation is a significant predictor of good patient outcomes.^{70–72}
3. *Community engagement and involvement:* Advocates and leaders who participated in focus groups strongly recommended that healthcare providers get acquainted with the communities they serve. Population health as an aspect of healthcare can be easily lost when solely focusing on individual patient care. More contact with AA communities will help counter some of the stereotypes that healthcare providers have about this population. Being more informed about the history and culture of the people by participating in community activities may be one strategy that helps providers see the patient in the proper sociocultural context. On the backdrop of this knowledge, providers will be better equipped to provide more culturally responsive care to low-income AA women and help reduce the existing health disparities.

Limitations

This study has a few limitations that must be acknowledged. First, the participants in this study were recruited by convenience sampling. Their experiences and perspectives may not be generalizable to all low-income AA women. Second, two investigators conducted the interviews independently. The data collected may have been influenced by interviewer characteristics such as personality and skill. However, to minimize variability, a semi-structured interview guide was used with prompts. In addition, both investigators were women of African heritage, which helped to foster rapport with participants, and each had considerable experience in qualitative data collection. Finally, demographic information provided is for all participants in the larger study, of which those interviewed were a subset. Demographic data pertaining to the 22 participants interviewed are not available as these were anonymously collected during the survey administration. Despite these limitations, the findings provide valuable insight into the healthcare experiences of low-income AA women and draw attention to how healthcare personnel, providers, and healthcare structure may be contributing to disparities in healthcare utilization and outcomes.

Conclusion

Findings from this study suggest that low-income AA women continue to experience perceived discriminatory treatment in healthcare settings. Structured cultural competency training for healthcare personnel and providers that addresses implicit bias and pervasive stereotypes about this population is highly recommended. More patient-centered and culturally responsive care can be enhanced by relationship-building with individual patients and with the AA community, in general. These strategies will improve quality of care and help eliminate the health disparities that adversely affect this population.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The research was funded by the Multicultural Research Award, sponsored by the University of Minnesota, Institute for Diversity, Equity and Advocacy.

ORCID iD

Olihe N Okoro  <https://orcid.org/0000-0002-1598-4415>

References

1. United Health Foundation, <http://www.unitedhealthfoundation.org/> (2017, accessed September–December 2017).
2. MN Community Measurement. 2014 Health equity of care report, 2014, <https://www.leg.state.mn.us/docs/2015/mandated/150464.pdf> (accessed 24 July 2018).
3. Minnesota Department of Health. Advancing Health Equity in Minnesota: Report to the Legislature, https://www.health.state.mn.us/communities/equity/reports/ahe_leg_report_020114.pdf (accessed February 2014)
4. Richman AD. Concurrent social disadvantages and chronic inflammation: the intersection of race and ethnicity, gender, and socioeconomic status. *J Racial Ethn Health Disparities* 2018; 5(4): 787–797.
5. Zahodne LB, Kraal AZ, Zaheed A, et al. Longitudinal effects of race, ethnicity, and psychosocial disadvantage on systemic inflammation. *SSM Popul Health* 2019; 7: 100391.
6. Robins JL and Kliewer W. Stress and coping profiles and cardiometabolic risk in low-income African American women. *J Womens Health (Larchmt)* 2019; 28(5): 636–645.
7. White BM, Rochell JK and Warren JR. Promoting cardiovascular health for African American women: an integrative review of interventions. *J Women Health* 2019; 29: 7580.
8. Chang M-H, Moonesinghe R, Athar HM, et al. Trends in disparity by sex and race/ethnicity for the leading causes of death in the United States—1999–2010. *J Public Health Manag Pract* 2016; 22(Suppl. 1): S13–S24.
9. Fryar CD, Ostchega Y, Hales CM, et al. Hypertension prevalence and control among adults: United States, 2015–2016. *NCHS Data Brief* 2017; 289: 1–8.
10. US Department of Health and Human Services, Centers for Disease Control and Prevention. National diabetes statistics report 2020. Estimates of diabetes and its burden in the United States. Atlanta, GA: Centers for Disease Control and Prevention, 2020, <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf> (accessed February 2020).
11. National Partnership for Women Children. Black women experience pervasive disparities in access to health insurance, <https://www.nationalpartnership.org/our-work/resources/health-care/black-womens-health-insurance-coverage.pdf> (accessed 5 March 2020).
12. Census. Minnesota, 2019, <https://www.census.gov/quick-facts/MN> (accessed 18 May 2019).
13. Clark KP and McMillan-Persaud B. Racial discordance in patient-physician relationships. *Am J Med* 2014; 127(3): e25.
14. Schoenfelder T. Patient satisfaction: a valid indicator for the quality of primary care. *Primary Health Care* 2012; 2(4): 1000e106.
15. Zolnieriek KBH and Dimatteo MR. Physician communication and patient adherence to treatment: a meta-analysis. *Med Care* 2009; 47(8): 826–834.
16. Minnesota Department of Health. Overview of the physician workforce, 2017, <https://www.health.state.mn.us/data/workforce/phy/docs/2017pchartbook.pdf> (accessed 24 July 2018).
17. Thomas SA and Gonzalez-Prendes AA. Powerlessness, anger, and stress in African American women: Implications

- for physical and emotional health. *Health Care Women Int* 2009; 30(1–2): 93–113.
18. Framework HMSHI. Healthy Minnesota 2020 statewide health improvement framework, 2019, <https://www.health.state.mn.us/communities/practice/healthymnpartnership/docs/1212healthymn2020fw.pdf> (accessed 29 May 2019).
 19. Marshall GN and Hays RD. The patient satisfaction questionnaire short-form (PSQ18), 1994, <https://www.rand.org/content/dam/rand/pubs/papers/2006/P7865.pdf> (accessed 5 March 2020).
 20. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, Smedley BD, Stith AY, et al. *Unequal treatment: confronting racial and ethnic disparities in health care*. Washington, DC: National Academies Press, 2003.
 21. Nguyen TT, Vable AM, Glymour MM, et al. Trends for reported discrimination in health care in a national sample of older adults with chronic conditions. *J Gen Intern Med* 2018; 33(3): 291–297.
 22. Facione NC and Facione PA. Perceived prejudice in health-care and women’s health protective behavior. *Nurs Res* 2007; 56(3): 175–184.
 23. Prather C, Fuller TR, Jeffries WL 4th, et al. Racism, African American women, and their sexual and reproductive health: a review of historical and contemporary evidence and implications for health equity. *Health Equity* 2018; 2(1): 249–259.
 24. Attanasio L and Kozhimannil KB. Patient-reported communication quality and perceived discrimination in maternity care. *Med Care* 2015; 53(10): 863–871.
 25. Dahlem CHY, Villarruel AM and Ronis DL. African American women and prenatal care: perceptions of patient–provider interaction. *West J Nurs Res* 2015; 37(2): 217–235.
 26. Allen AM, Thomas MD, Michaels EK, et al. Racial discrimination, educational attainment, and biological dysregulation among midlife African American women. *Psychoneuroendocrinology* 2019; 99: 225–235.
 27. Thomas MD, Michaels EK, Reeves AN, et al. Differential associations between everyday versus institution-specific racial discrimination, self-reported health, and allostatic load among black women: implications for clinical assessment and epidemiologic studies. *Ann Epidemiol* 2019; 35: 20–28.
 28. Mouton CP, Carter-Nolan PL, Makambi KH, et al. Impact of perceived racial discrimination on health screening in black women. *J Health Care Poor Underserved* 2010; 21(1): 287–300.
 29. Cuevas AG, O’Brien K and Saha S. African American experiences in healthcare: “I always feel like I’m getting skipped over.” *Health Psychol* 2016; 35(9): 987–995.
 30. Cooper LA, Roter DL, Carson KA, et al. The associations of clinicians’ implicit attitudes about race with medical visit communication and patient ratings of interpersonal care. *Am J Public Health* 2012; 102(5): 979–987.
 31. Blair IV, Steiner JF, Fairclough DL, et al. Clinicians’ implicit ethnic/racial bias and perceptions of care among Black and Latino patients. *Ann Fam Med* 2013; 11(1): 43–52.
 32. Street Jr RL, Gordon H and Haidet P. Physicians’ communication and perceptions of patients: is it how they look, how they talk, or is it just the doctor? *Soc Sci Med* 2007; 65(3): 586–598.
 33. Maina IW, Belton TD, Ginzberg S, et al. A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test. *Soc Sci Med* 2018; 199: 219–229.
 34. Reeder Hayes KE, Mayer SE, Olshan AF, et al. Race and delays in breast cancer treatment across the care continuum in the Carolina Breast Cancer Study. *Cancer* 2019; 125(22): 3985–3992.
 35. FitzGerald C and Hurst S. Implicit bias in healthcare professionals: a systematic review. *BMC Med Ethics* 2017; 18(1): 19.
 36. Han X, Call KT, Pintor JK, et al. Reports of insurance-based discrimination in health care and its association with access to care. *Am J Public Health* 2015; 105(Suppl. 3): S517–S525.
 37. Martinez-Hume AC, Baker AM, Bell HS, et al. “They treat you a different way”: public insurance, stigma, and the challenge to quality health care. *Cult Med Psychiatry* 2017; 41(1): 161–180.
 38. Weech-Maldonado R, Hall A, Bryant T, et al. The relationship between perceived discrimination and patient experiences with health care. *Med Care* 2012; 50(9 Suppl. 2): S62–S68.
 39. Thorburn S and De Marco M. Insurance-based discrimination during prenatal care, labor, and delivery: perceptions of Oregon mothers. *Matern Child Health J* 2010; 14(6): 875–885.
 40. Tajeu GS, Cherrington AL, Andreae L, et al. “We’ll get to you when we get to you”: exploring potential contributions of health care staff behaviors to patient perceptions of discrimination and satisfaction. *Am J Public Health* 2015; 105(10): 2076–2082.
 41. Long SK. Physicians may need more than higher reimbursements to expand Medicaid participation: findings from Washington State. *Health Aff* 2013; 32(9): 1560–1567.
 42. Graaf G and Snowden L. Public health coverage and access to mental health care for youth with complex behavioral healthcare needs. *Admin Policy Mental Health Serv Res* 2019; 47: 395–409.
 43. Decker SL. Acceptance of new Medicaid patients by primary care physicians and experiences with physician availability among children on Medicaid or the children’s health insurance program. *Health Serv Res* 2015; 50(5): 1508–1527.
 44. Gardner L and Vishwasrao S. Physician quality and health care for the poor and uninsured. *Inquiry* 2010; 47(1): 62–80.
 45. Spencer CS, Gaskin DJ and Roberts ET. The quality of care delivered to patients within the same hospital varies by insurance type. *Health Aff* 2013; 32(10): 1731–1739.
 46. Hasan O, Orav EJ and Hicks LS. Insurance status and hospital care for myocardial infarction, stroke, and pneumonia. *J Hosp Med* 2010; 5(8): 452–459.
 47. Van Ryn M and Burke J. The effect of patient race and socioeconomic status on physicians’ perceptions of patients. *Soc Sci Med* 2000; 50(6): 813–828.
 48. Singhal A, Tien YY and Hsia RY. Racial-ethnic disparities in opioid prescriptions at emergency department visits for conditions commonly associated with prescription drug abuse. *PLoS ONE* 2016; 11(8): e0159224.
 49. Meghani SH, Byun E and Gallagher RM. Time to take stock: a meta-analysis and systematic review of analgesic

- treatment disparities for pain in the United States. *Pain Med* 2012; 13(2): 150–174.
50. Hoffman KM, Trawalter S, Axt JR, et al. Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proc Natl Acad Sci* 2016; 113(16): 4296–4301.
 51. Walker Taylor JL, Campbell CM, Thorpe RJ Jr, et al. Pain, racial discrimination, and depressive symptoms among African American women. *Pain Manag Nurs* 2018; 19(1): 79–87.
 52. Benjamin EJ, Blaha MJ, Chiuve SE, et al. Heart disease and stroke statistics-2017 update: a report from the American Heart Association. *Circulation* 2017; 135(10): e146–e603.
 53. Fang H and Moro A. Theories of statistical discrimination and affirmative action: a survey. In: Benhabib J, Bisin A and Jackson MO (eds) *Handbook of social economics*, vol 1. New York: Elsevier, 2011, pp. 133–200.
 54. Chapman EN, Kaatz A and Carnes M. Physicians and implicit bias: how doctors may unwittingly perpetuate health care disparities. *J Gen Intern Med* 2013; 28(11): 1504–1510.
 55. Green AR, Carney DR, Pallin DJ, et al. Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. *J Gen Intern Med* 2007; 22(9): 1231–1238.
 56. Sexually Transmitted Disease Surveillance, 2017, <https://stacks.cdc.gov/view/cdc/59237> (accessed 18 May 2019).
 57. Minnesota Department of Health. Sexually transmitted disease (STD) Surveillance Report, 2018, <https://www.health.state.mn.us/diseases/stds/stats/2018/index.html> (accessed 18 May 2018).
 58. Hogben M and Leichter JS. Social determinants and sexually transmitted disease disparities. *Sex Transm Dis* 2008; 35(12 Suppl.): S13–S18.
 59. Poverty rates by race/ethnicity, 2017, <https://www.kff.org/other/state-indicator/poverty-rate-by-raceethnicity/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D> (accessed 18 May 2019).
 60. Mufwene SS. What is African American English? In: Lanehart SL (ed.) *Sociocultural and historical contexts of African American English*. Amsterdam: John Benjamins, 2001.
 61. Green LJ. *African American English: a linguistic introduction*. Cambridge: Cambridge University Press, 2002.
 62. Harris T. What's so wrong with sounding black? *Psychology Today* 2010(9): 17–18.
 63. Mgadmi M. Black women's identity: stereotypes, respectability and passionlessness (1890-1930). *Revue LISA/LISA e-journal* 2009; 7(1): 40–55.
 64. Metzl JM and Roberts DE. Structural competency meets structural racism: race, politics, and the structure of medical knowledge. *AMA J Ethics* 2014; 16(9): 674–690.
 65. Blair IV and Banaji MR. Automatic and controlled processes in stereotype priming. *J Personal Social Psychol* 1996; 70(6): 1142.
 66. Devine PG. Stereotypes and prejudice: their automatic and controlled components. *J Personal Social Psychol* 1989; 56(1): 5.
 67. Johnson RL, Roter D, Powe NR, et al. Patient race/ethnicity and quality of patient–physician communication during medical visits. *Am J Public Health* 2004; 94(12): 2084–2090.
 68. Hall WJ, Chapman MV, Lee KM, et al. Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: a systematic review. *Am J Public Health* 2015; 105(12): e60–e76.
 69. Sabin DJA, Nosek DBA, Greenwald DAG, et al. Physicians' implicit and explicit attitudes about race by MD race, ethnicity, and gender. *J Health Care Poor Underserved* 2009; 20(3): 896–913.
 70. Beach MC, Keruly J and Moore RD. Is the quality of the patient-provider relationship associated with better adherence and health outcomes for patients with HIV. *J Gen Intern Med* 2006; 21(6): 661–665.
 71. Ciechanowski PS, Katon WJ, Russo JE, et al. The patient-provider relationship: attachment theory and adherence to treatment in diabetes. *Am J Psychiatry* 2001; 158(1): 29–35.
 72. Langebeek N, Gisolf EH, Reiss P, et al. Predictors and correlates of adherence to combination antiretroviral therapy (ART) for chronic HIV infection: a meta-analysis. *BMC Med* 2014; 12(1): 142.