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## Beliefs about Racism and Health among African American Women with Diabetes: A Qualitative Study

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### Abstract

Exposure to racism has been linked to poor health outcomes. Little is known about the impact of racism on diabetes outcomes. This study explored African American (AA) women's beliefs about how racism interacts with their diabetes self-management and control. Four focus groups were conducted with a convenience sample of 28 adult AA women with type 2 diabetes who were recruited from a larger quantitative study on racism and diabetes. The focus group discussions were transcribed verbatim and analyzed by the authors. Women reported that exposure to racism was a common phenomenon, and their beliefs did in fact link racism to poor health. Specifically, women reported that exposure to racism caused physiological arousal including cardiovascular and metabolic perturbations. There was consensus that physiological arousal was generally detrimental to health. Women also described limited, and in some cases maladaptive, strategies to cope with racist events including eating unhealthy food choices and portions. There was consensus that the subjective nature of perceiving racism and accompanying social prohibitions often made it impossible to address racism directly. Many women described anger in such situations, and the tendency to internalize anger and other negative emotions, only to find that the negative emotions would be reactivated repeatedly with exposure to novel racial stressors, even long after the original racist event remitted. AA women in this study believed that racism affects their diabetes self-management and control. Health beliefs can exert powerful effects on health behaviors and may provide an opportunity for health promotion interventions in diabetes.

### Keywords

racism; diabetes; women; African American; beliefs

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## Introduction

Over three million adult African Americans (AA) have diabetes, and one in four AA women over 55 years of age has diabetes. Because of the increasing lifespan of women and the rapid growth of ethnic minority populations, the number of AA women in the U.S. with diabetes will continue to increase.<sup>1</sup> AAs with diabetes are more likely to experience long-term complications such as retinopathy,<sup>2</sup> tissue injury requiring amputation,<sup>3</sup> and nephropathy<sup>4</sup> compared to Whites.

Underlying pathologies common to virtually all diabetes complications include elevated blood pressure and hyperglycemia, conditions which are largely manageable with appropriate health behaviors. Racial disparities in each of these parameters – blood pressure, glycemic control, and health behaviors – have been well documented.<sup>5–8</sup> The reason for these racial differences is almost certainly multi-factorial, including genetic, biological, cultural, socio-economic, and political factors. AAs exposure to racism is emerging as a novel factor that may contribute to racial differences in health outcomes. In this study, we explore AA women's beliefs about how exposure to racism affects their diabetes.

## Racism and disease

Racism is a stressor that has been linked to a variety of poor health outcomes, including poor glycemic control.<sup>9</sup> Racial discrimination may *indirectly* increase one's risk for disease by limiting access to care, the quality of care, and patient preferences for care. Racism may also *directly* increase one's risk for disease by posing a biological challenge to the human regulatory system. It is this latter relationship that our research addresses: women's beliefs about how experiencing racism may cause behavioral and physiological perturbations that predispose or exacerbate poor glycemic control and long-term complications.

William and Mohammed (2009) posit that gender may moderate the relationship between discrimination and health.<sup>10</sup> While men tend to report higher levels of discrimination than women,<sup>11</sup> gender differences in the consequences of a stressor may manifest in the opposite direction. For example, men report higher levels of exposure to traumas, but post-traumatic stress disorder is more prevalent in women than in men.<sup>12</sup> We have documented that men and women report similar frequency of racist events, but that women rate these events as more stressful than men do.<sup>13</sup>

## Health beliefs

Health beliefs are the attitudes regarding the cause, course, and treatment of an illness. Health beliefs have an important influence on AAs with diabetes, including acknowledgement of the disease,<sup>14</sup> screening for complications<sup>15</sup> and performing self-care activities.<sup>16</sup> This may be because culture and life experiences shape health beliefs<sup>17</sup> and, in turn, influence an individual's subjective experience with diabetes. For example, AAs may differ in their perception of physical or emotional experiences as a problem, as well as the causal link of those perceptions to disease.<sup>18</sup> It has been suggested that understanding these health beliefs is crucial for providing care to AAs with diabetes.<sup>19</sup>

It is unknown what AAs with diabetes believe regarding the role of racism in their diabetes self-management and control. Given the growing literature on racism as a health risk factor,<sup>10, 20</sup> and the high burden of diabetes among AAs, there are surprisingly scant data regarding racism and diabetes.<sup>13, 21</sup> Qualitative studies have long identified unique psychosocial issues among AAs with diabetes,<sup>22</sup> and have suggested the need to understand racism, historical grief, and trauma among ethnic minorities with diabetes.<sup>23</sup> Therefore, the aims of this study were to explore women's beliefs about how racist events and their reactions to these events influence their diabetes.

## Methods

### Sample

Four focus groups were conducted with a convenience sample of AA women who were recruited from a larger quantitative study of racism and diabetes in women. Eligibility criteria for the parent study were: 18–80 years old, female, diagnosed with type 2 diabetes mellitus, self-identification as AA or White, U.S. born, and no major medical, psychiatric, or substance abuse conditions. AA women from the parent study were invited to participate in focus groups at the University of Connecticut Health Center. Focus group participants were provided light refreshments and \$50 for participation. The University of Connecticut Institutional Review Board approved all procedures.

### Data Collection

Two experienced race concordant moderators with graduate degrees in psychology moderated the focus group discussions. The focus group sessions began with written informed consent, introductions, socialization to the study and its purpose, an explanation of how the participants had been chosen, description of how data would be handled, and an outline of the focus group process. Ground rules including confidentiality were clarified and participant questions were answered.

Semi-structured focus group questions were derived from a literature review, our research aims, guidelines for the development of focus group questions,<sup>24</sup> and principles for conducting focus groups on sensitive topics.<sup>25</sup> Questions were designed to promote discussion about experiences with racism and diabetes. First, the interview guide inquired about definitions and descriptions of racism. *How do you define racism? How would you describe it?* Second, we explored personal experiences with racism. *Have you ever experienced racism? If so, please tell us about it.* Third, we addressed beliefs pertaining to emotional, physical, and other reactions to racism. *Can you talk about how you react to racism? Please tell us about what you think and do. Please talk about how you respond emotionally and physically.* Fourth, we addressed the differences and similarities between racism and other life stressors. *Is racism similar or different from other stressors in your life? In what way?* Finally, we explored the relationship between experiencing racism and diabetes care. *When you experience racism, does it affect your diabetes? If so, how?* These primary questions were followed by more specific follow up queries, which were formulated a priori by the investigators, as well as in real time during the focus groups by the moderators. The discussions were audio taped and moderators collected written notes to supplement the audiotapes.

### Data Analysis

Audiotapes were transcribed verbatim. Moderators reviewed the transcripts to ensure accurate reflection of focus group discussions. Once the focus groups transcripts were transcribed, four trained coders (JAW, CYO, EAM, LMB) used grounded theory to code, analyze, and interpret the transcripts.<sup>26</sup> Coding discrepancies were identified and resolved in an iterative process until a final coding system was accepted. All transcripts were coded using the final list of 31 codes and organized around eight key themes. Themes included (1) definitions of racism, (2) subjectivity of racism, (3) racism and lifespan development, (4) shifting priorities of racism and health (5) beliefs about racism, mood, and emotions, (6) beliefs about physiological reactions to racism, (7) beliefs about racism and diabetes, (8) limited coping strategies for racial stressors. Representative quotes are presented for each theme.

## Results

Twenty-eight of the 37 women invited to participate from the parent study participated in one of four focus group discussions. There were no significant differences between those who consented to participate in a focus group and those who declined to participate on age, glycemic control (hemoglobin A1c), education, or income (see Table 1).

### Personal definitions of racism

*"I just see it as sort of being like hatred."* A preliminary goal was to elicit personal definitions of racism. Across each focus group, there was consensus that racism is a form of 'judgment' and 'negative treatment' based on phenotypic characteristics such as skin tone, hair texture, and facial features. There was consensus that racism is learned from environmental influences, including from family and society, and that it manifests as inter-group or intra-group racism. Both interpersonal (e.g., patient and provider) and institutional racism (e.g., health care system) were acknowledged. For example, one woman described physicians in the hospital where she had been admitted for a medical problem who assumed that she was a "junky", or *drug addict* because of her race.

The language used to describe racism was often intense, as illustrated in one woman's phrase, *"Deep and dirty and killing racism."* Often, respondents incorporated "hatred" in their definition of racism. For example, one respondent said, *"You can't change a person. They hate you, they hate you. They hate your skin color they hate the way you walk."* Some participants referenced insult and threat of physical harm requiring self-defense. For example, when asked to describe racism, a 57 year old woman gave a personal anecdote, *"...back when I went to school was like just beginning of this, when things were just getting [de]segregated... They used to call me names every day. And I used to have to carry a pocketbook just like this, and I used to tear 'em up with my pocketbook."* These definitions and examples of racism incorporate the elements of judgment, mistreatment, insult, hatred, threat of physical harm, and need for self-defense.

### Racism is subjective

*"How sensitive I am to the issues determines whether I consider it racism or not."* Most participants acknowledged, and a number of them emphasized, individual variation in perceiving stimuli as racist, illustrating the subjective nature of racism and the subtle cues that influence this perception (e.g., tone of voice, facial expression). One woman stated, *"I experience racism all the time. It's everywhere,"* yet another said, *"I don't really feel like I experience racism much at all."* A 41 year old woman stated: *"If you had a White person that was a good friend, they wouldn't even see it the same way that you see it. They wouldn't even think of it the same way that you think of it. So I don't know. I think it is a perception sometimes."* As one woman stated, *"Sometimes it is real. The ones that are blatant, there is no doubt that it is racism, but the ones that are real subtle it is hard to tell."*

### Racism occurs in the context of lifespan development

*"We're all at different stages in our lives."* Participants reported exposure to racism throughout the lifespan: childhood, the child bearing years, and later in life. Childhood experiences of racism appeared to be the most salient, as participants reported being called racist names, discouraged by teachers because of their race, asked to demean themselves for White people, and described segregation from White children in extracurricular activities. Several women stated that they 'relived' racism from their own childhood when their children experienced racism. For example, a 56 year old woman said, *"I sort of relived my childhood,"* when she described how her daughter experienced racism in Brownies, just as

she had when she was a girl. *“All those emotions, you know, just got riled up because some of it brought me back to my childhood experiences.”*

Participants reported that racism became less salient and less important in later years. One respondent explained, *“Personally, I don’t experience it or notice it as much as I did many years ago.”* Another respondent emphasized the relationship between racism and age, explaining, *“you just get to a point where there’s just certain things that you just don’t let it bother you...Life [is] too short.”* Similarly, another respondent explained, *“we’re all at different stages in our lives, and we’re just mature women...at the point where racism... has affected us, it has affected us, but it doesn’t really matter [anymore].”*

### Shifting priorities of racism and health

*“I don’t look at racism anymore. Now I look at my health.”* Many participants explained that racism is less burdensome in older age because the relative burdens of various life stressors shift over time. Specifically, managing diabetes replaces racism as a primary source of stress. Among participants, diabetes superseded concerns about racism, and in fact diabetes was the major stressor in the lives of most participants. Significant diabetes stressors included a diabetes diagnosis, the fear of developing diabetes complications and the demands of coping with existing long-term complications. Additional diabetes stressors included daily diabetes self-management (e.g., healthy eating, taking medication, monitoring blood glucose), interference from family members, and the economic burden of diabetes. One woman stated, *“Racism is on the bottom of my list of stressors. More important things stress me out. I don’t have health insurance right now. I’m on disability. I can’t work.”* Thus, older women reported that racism was present, and was considered a stressor, but one with less impact on daily experience than diabetes.

### Beliefs about racism, mood and emotions

*“It’s almost like a prison. You are locked in.”* Emotional reactions are defined here as specific, short-term emotional states that are triggered by an event and that occurs outside an individual’s purposeful intention to respond to the stressor. In contrast to their statements about racism being a relatively unimportant source of stress, participants reported that strong emotional reactions to racist events were common, including anger, hurt, frustration, rage, bitterness, fear, nervousness, and stress. One woman described how deeply racism affects her: *“Anger. Hurt. Deep hurt. Sometimes rage will take over... Then I have to try and get that in check because, you know, I don’t want to lash out.”*

Participants went on to describe how these emotional reactions could be re-experienced long after the original racist event. A respondent explained, *“Anger. Frustration. I try to forget it, too, but I don’t think it is every forgotten...something else happens and it brings it up again. So I never really forget it.”*

Many women described ways in which racism can also affect mood. Mood is the relatively nonspecific, long lasting emotional state that predisposes one to acute emotional reactions. For example, one woman stated, *“It makes me angry. So...the next time I go out, the first person that piss me off, I’m not gonna hold back any emotions.”* A 39-year old woman told us, *“... I internalize everything...I turn everything inward and over the years, dealing with the racism, and dealing with that mentality, and thinking how I was raised - a lot of that became depression.”*

### Beliefs about physiological reactions to racism

*“It’s going to affect some part of my body.”* Most participants believed they experience physiological responses to racism and volunteered symptoms including racing heart,



pounding heart, elevated blood pressure, flushing, muscle tension, headache, and upset stomach. *"If I'm angry then everything is tense. Everything, you know, your blood pressure goes...It's either fight or flight."* A 33 year old woman also said, *"Yeah, my stomach. My body, you know what I mean. It is a feeling that I get. That's where I hold my stress, in my stomach, in my body."*

As with emotional re-experiencing, many women believed that racism may elicit physiological re-experiencing via recall and rumination long after the racial stressor remits. Participants reported: *"It's never resolved. Because I'll be all right for a while and then it just comes right back again."* And, *"what I find is that over the years I have stuffed things... and I didn't realize how much it had affected me until we had this Diversity Day at my job and I was relaying that story and then I became so hysterical years later. I became so hysterical over it because I never dealt with it."*

### Beliefs about racism and diabetes

*"It not only affects you as a person, but [also] your diabetes."* Some women described a belief that racism is connected to their overall, general health, and many connected racism specifically to their diabetes and blood glucose. A common sentiment was that stress is bad for diabetes, so getting 'stressed out' about a racist event is bad for the body: *"it's gonna affect us because we have the disease. If you're a healthy person, it's not."* Experiencing negative emotions in response to racism was the key belief system regarding an association between racism and diabetes. Some women described a *direct* connection between racism-evoked negative emotions and health. One respondent describes, *"...if you're angry, then... you know, your sugar is going to go up."* Another explains, *"I always say 'I don't want to live the life where I'm like a powder keg' because I'm waiting to explode or that 'pressure cooker.' I have to release it, because...it's damaging the inside of me. And I have to let it out...I mean, being a diabetic, that's going to cause that sugar to start flaring up..."* Another woman shared, *"...my sugars are going to go up...probably getting all of these other symptoms to act up and possibly end up with a heart attack or worse or in the hospital..."*

Participants also described a belief in *indirect*, behavioral connections between racism-evoked negative emotions and health. They reported that food choices and food portions consumed in response to negative emotions associated with racism were usually unhealthy and had strong implications for glucose control. Some illustrative quotes include, *"I'll eat. I'll pig out,"* and, *"I'm more likely to get that carrot cake from Sam's, rather than fruit from Whole Foods."* Another participant described: *"And then you're sitting there and you're eating because you're stuffing those emotions, and I'm not gonna eat the right thing. You know, I ain't gonna pull out no apple. I'm gonna eat my chips. I'm gonna eat what I'm not supposed to eat because I wanna be satisfied."*

### Limited coping strategies for racial stressors

*"I couldn't say to him what I wanted to say...I internalize this and this affects me, my illness. It can make it worse."* Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, tolerate, reduce, or minimize stressful events.<sup>27</sup> Two broadly defined classes of coping strategies were proposed in early research, including problem-focused coping strategies (i.e., efforts to do something active to alleviate stressful circumstances) and emotion-focused coping strategies (i.e., efforts to regulate the emotional consequences of stressful events).

A notably limited number of active coping strategies were discussed by participants, such as filing a complaint at work, confronting the racist person, ceasing to patronize a racist

establishment, or ending the relationship with a person perceived as racist. A repeated theme was the inability to employ an active coping strategy for a racial stressor that would otherwise be safe, acceptable, and effective for non-racial stressors. One respondent said, “A lot of times we are not able to say what we really want to say.” Another stated, “We were taught to shrug it off. Don’t talk about it. You know, put it under the rug.”

Participants expressed that safety concerns, fear of retaliation, or social prohibitions deterred them from employing active coping strategies: “I can address, ‘give me my money back. Here’s my receipt.’ You can address that. Racism, when it comes, it comes in so many undertows. But you know it’s racism, you know it’s racism, you know it’s racism. What do we say? How do we say what we want to say...?” A consistent exception to this theme, when women reported more active coping, involved their children’s exposure to racism. One woman stated, “I’m more likely to do something about it if it has to do with my child.”

When asked about coping, very few women reported how they coped with a particular racist event from their own history. Rather, most women summarized the types of coping mechanisms they believe they employed. The most commonly reported strategy was to internalize difficult emotional reactions to racism even though there was general consensus this approach predisposes oneself to later emotional and physical health problems. The following quotes illustrate internalizing and the perceived dangers associated with it: “I just stuff it...”; “I internalize it”; and “It builds up stuff inside of us...Like you say, ‘whatever’, but deep down inside [it’s there] because it wasn’t expressed healthy.”

The corollary belief held by respondents was that directly addressing a racist situation, or discussing it with another person is healthy. One respondent stated, “I think I feel better when I let it out. I don’t get physical but verbal, yes. Yep, and it does feel better when you let it out.”

Some women reported using religion and prayer to cope, stating “Sometimes it’s good to pray.” One woman explained how her faith in God mitigates the effects of racism: “I know racism doesn’t define who I am as a woman...I say that because the God that I serve, you know what I mean. I’m rubies, I’m gold, and I’m jewels, and I don’t even think about [racism]... I will not allow it. I don’t care. You could be racist all day.”

## Discussion

This sample of AA women with diabetes described personal experiences of racism that they believed exerted deleterious effects at the time of occurrence, as well as months and even years later. Women’s beliefs did in fact link racism to diabetes self-management and control, primarily through negative mood, negative emotions, physiological arousal, as well as limited, and in some cases maladaptive, coping strategies. Women’s personal beliefs regarding racism and its influence on diabetes provide insight into the sociocultural forces impinging on diabetes self-management and control, and suggest potential areas for intervention.

Several themes emerged. One pertained to definitions and personal experiences of racism. Most research in this area applies an a priori definition of racism, or asks respondents to endorse racial situations they have experienced, without explicitly exploring participants’ views of racism.<sup>28</sup> Instead, we asked participants about their views of racism. Overall, racism was thought to be common, subjectively determined, with varying meaning and salience across the life stages. And although this sample tended to endorse other life stressors such as health and finances as more distressing than racism, they nonetheless described racism in vivid terms underscoring the intensity of its stressfulness.



As in the broader literature, all participants reported exposure to racism at some point in their lives,<sup>21</sup> yet there was considerable variation in the frequency of its occurrence. Some racism is relatively objective, wherein the intent of the perpetrator to be racist is made explicit, such as a hate crime or when a racial epithet is used, whereas other forms of racism are more subtle and implicit.<sup>29</sup> Mistreatment for which the intent is unknown involves some degree of judgment regarding its racial bias. We suggest it is the *perception* of racism, regardless of intent, that leads to deleterious health outcomes. This approach draws on the work of Lazarus (1978) and others who posit that the effects of stress exposure are mediated through an individual's appraisal of the stressor.<sup>30, 31</sup>

Women also described their beliefs about the health consequences of racism. Experiencing negative emotions was the main link between racism and disease. More specifically, women described a strong belief that holding these negative emotions caused changes in mood, emotion, behavior, glycemia, and cardiovascular functioning. Indeed, respondents' beliefs concur with data showing that both infrequent overt events (e.g., aggression, harassment) and frequent subtle events (e.g., rejection, exclusion) are associated with emotional changes that may have deleterious physiological effects.<sup>30</sup>

Many women stated that these perturbations could occur repeatedly over many years with recall of a previous racist experience or vicarious exposure to racism, especially through their children. Data show that recalling a temporally distal stressful event can cause renewed cardiovascular reactivity<sup>32</sup> minutes, hours, or even years later, albeit of a diminished magnitude relative to the original stressor.<sup>33</sup> Data suggest that the time period between stressor and recall (e.g., 30 minutes or one week) may not affect the level of renewed reactivity.<sup>33</sup> Laboratory studies using anger recall interviews show that self-reported recalled anger is significantly correlated with cardiovascular reactivity.<sup>34</sup> Diabetes may moderate the physiological effects of anger recall, as anger recall increases cytokine secretion in insulin resistant individuals, but not insulin sensitive individuals.<sup>35</sup>

Limited or maladaptive coping strategies was another link women provided between experiencing racism and compromised health. Women reported a limited repertoire of safe and socially acceptable problem-focused coping strategies to directly address racism, and therefore commonly employed emotion-focused coping. The broader coping literature has for many years acknowledged that people are often constrained from using certain coping strategies, and must instead accommodate to situational demands.<sup>36</sup>

Avoidant strategies, especially the internalization of negative emotions, were the most prominent coping mechanism. Internalizing emotions was believed to be associated with overeating as well as physical, psychological, and emotional harm. The literature now shows there is no single style of coping associated with better health outcomes. Rather a coping mechanism is beneficial to the extent it is a good fit with the demands of a particular stressor. Notwithstanding, active coping strategies, such as behavioral or psychological strategies designed to change the nature of the stressor itself, or how one thinks about it, are thought to be more beneficial, whereas avoidant coping strategies, including activities or mental states that keep individuals from directly addressing the stressful event, appear to be risk factors for adverse psychological adjustment.<sup>37</sup> Anderson and Lawler (1995) found that women who suppressed anger expression during an anger recall exercise experienced higher blood pressure responses than women who expressed anger assertively.<sup>38</sup> Similarly, Krieger (1990) found that AA women who usually accepted and kept quiet about unfair treatment were 4.4 times more likely to report a diagnosis of hypertension than women who said they took action and talked to others.<sup>39</sup> Subtle racist events in particular, such as social slights and ambiguous remarks, may not elicit active coping strategies. And when these events

occur in the healthcare setting, they may have an added indirect impact on health through patient mistrust.<sup>40</sup>

### Additional observations

Some preliminary findings not described in our results section are noteworthy. First, a few women described that the legacy of slavery and segregation may play a role in the onset of diabetes. They linked slavery to a long family history of diabetes. However, none speculated about specific mechanisms through which slavery may have increased familial diabetes risk. While most women discussed only their personal history with racism, we suggest any discussion of racism among AAs cannot be isolated from a collective history of forced migration, slavery, and a system of segregation based on law and custom.

Second, several participants made derogatory remarks about other ethnic minority groups in the U.S. including Vietnamese, Puerto Ricans, and Spanish speakers. Examples include frustration with Spanish speakers who do not learn English, a belief that other minority groups did not maintain their housing, displeasure that their AA children dated people from other ethnic minority groups, and concern that ‘new’ minorities were trying to force AAs out of jobs. To the extent that negative emotions may exacerbate diabetes control, these animosities toward other ethnic groups may also play a role in racism’s negative effect on health.

Third, many women described a belief in a natural order that punishes hatred. This included punishment for hating others, as well as punishment of others for their own hatred. One woman stated, *“You know, God make you pay for anger and hate. It will come out of your body...you gonna be all old and crumpled up.”* The belief that hatred’s negative consequences are externally controlled may have intervention implications.

### Putative mechanisms linking racism to diabetes self-management and control

If our participants’ beliefs are validated with quantitative data, then biologically plausible mechanisms by which racism gets ‘under the skin’ should be explored. That is, how is exposure to racism transmuted from a psychosocial experience into a physiological one?

A large body of literature documents the effects of chronic and acute stressors on cardiovascular outcomes including blood pressure and hemodynamic reactivity. While data regarding perceived discrimination and hypertension status are mixed, data regarding perceived racism and hemodynamic reactivity and recovery are consistent. Data suggest that past experiences of racism are associated with greater physiological responses to, and delayed recovery from, acute stress.<sup>30, 32</sup> These differences in cardiovascular reactivity are clinically meaningful, as blood pressure reactivity to mental stress is predictive of incident hypertension<sup>41</sup> and coronary artery calcification.<sup>42</sup>

Acute stress may affect glycemic control directly via hepatic glucose release and counter regulatory hormones, or indirectly via cortisol, which may lead to or exacerbate insulin resistance through adipose changes. Stressors associated with glucose excursions prospectively in human ecological studies<sup>43</sup> include everyday, ‘minor’ stressors.<sup>44</sup> Epidemiological data link unfair treatment to the metabolic syndrome, central adiposity, insulin resistance, and elevated fasting blood glucose.<sup>45–48</sup>

A small body of literature documents relationships between perceived racism and health behaviors. Perceived racial discrimination has been shown to be related to cigarette smoking and alcohol consumption,<sup>49</sup> as well as delays in seeking medical care, never seeking attention about a medical problem, not filling a prescription, not coming back for a follow-up appointment, and not following the doctor’s advice or treatment plan.<sup>50</sup>

## Limitations and future directions

Self-report may not reflect actual experience. For example, self-reports of emotion and physical symptoms vary according to reporting conditions and, generally, reports of current emotions and symptoms are more accurate than memory based reports. Because recall of details declines over time, eventually there is a shift from reporting emotions and symptoms to reporting beliefs about emotions and symptoms.<sup>51</sup> Additionally, the emotional and physiological reactions described here may not be detected during real time physiological monitoring, and the coping mechanisms described here may not be those employed when observed in real time. The rather modest concordance between recalled coping and coping strategies measured close to their real time occurrence has been well documented.<sup>52</sup>

Given these limitations of self-report, it is important to note that this qualitative study regarding AA women's health beliefs was performed within the context of a multi-method program of research investigating racism and diabetes. One method involves experimental manipulation of a racial stressor with concurrent physiological monitoring. Another method involves ecologically valid real-time measurement of perceived stress along with concurrent measurement of glycemic, cardiovascular, and behavioral reactivity. This broader program of research allows us to objectively observe stress, reactivity, and coping in real time. In this way, our program of research measures actual experiences and behavior, rather than solely relying on self-reported beliefs about associations between stress and reactivity.

These caveats notwithstanding, beliefs can exert powerful effects on behavior. In fact, evidence suggests that in certain situations beliefs about an experience can exert even more powerful influence on behavior than one's actual experience.<sup>53</sup> For example, Glasgow and colleagues (1997) showed that beliefs regarding diabetes treatment effectiveness are better predictors of regimen adherence than actual barriers to self-management.<sup>54</sup> Others have posited that multigenerational legacies of diabetes in a family can shape a family member's health beliefs and influence health behaviors.<sup>55</sup> Our findings suggest that believing racism affects health may exert a powerful effect on diabetes regardless of whether this is actually the case. As one woman stated, *"I try to take care of myself when I get stressed out. I know that because I have diabetes stress is especially bad for me. I really try to calm myself down when I feel stress by taking a few deep breaths or going for a walk. I try not to let things get to me as much. I've also had people in my family die from diabetes. My mother was on dialysis for years, and I would hate to go through that."* Understanding patients' beliefs in this regard may inform targeted interventions.

Other limitations include a small sample from a single geographic location. Additionally, these participants were primed for the focus group questions by virtue of having recently participated in a quantitative study on racism and diabetes.

## Conclusions

Racism will not be eradicated from society in the foreseeable future, if ever. Nonetheless, clinical interventions to ameliorate the deleterious effects of racism on health may hold promise. Coping skills training, stress management, relaxation training, assertiveness training, and stress inoculation interventions may be beneficial.<sup>56, 57</sup> Such interventions may prove more beneficial when tailored to participants' stage of life, co-occurring demands of diabetes, intergenerational dynamics, and beliefs about racism engendered stress. They may also yield more generalized effects that help participants deal with other life stressors.

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**Table 1**

Demographic characteristics of the focus group participants.

	Mean (SD) and % n=28
<b>Age</b>	52 (10)
<b>Education</b>	
Did not graduate from high school	15%
Completed high school or GED	23%
Post high school training/some college	38%
Completed college	24%
<b>Annual Income</b>	
0–\$10	31%
\$11–40	31%
\$41–80	19%
>\$81	19%
<b>Marital Status</b>	
Single	39%
Married	35%
Divorced/separated	19%
Window	4%
<b>Insurance Status</b>	
Yes (including Medicare, Medicaid)	100%
No	0%
<b>Duration of Diabetes in years</b>	10 (9)
<b>Age Diagnosed with Diabetes</b>	41 (10.1)
<b>Hemoglobin A1c</b>	7.1 (1.6)
<b>Diabetes Treatment</b>	
Diet Only	4%
Oral Agents	69%
Insulin	23%
Oral Agents & Insulin	4%
<b>BMI</b>	34.6 (7.1)
<b>Average Resting Blood Pressure</b>	
Systolic	131 (22.3)
Diastolic	73 (11.7)
Heart rate	71 (10.8)