RESEARCH ARTICLE

Hunger of the Body and Hunger of the Mind: African American Women's Perceptions of Food Insecurity, Health and Violence

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ABSTRACT

Objective: This qualitative study examined the relationship between health, hunger, and food insecurity among African American women in Philadelphia.

Design: Four focus groups and 12 individual in-home, semistructured interviews were conducted.

Setting: 3 food pantries in Philadelphia, Pennsylvania.

Participants: 34 women recruited from 3 food pantries.

Phenomenon of Interest: Interview topics included participants' experiences of food insecurity, food sources, and the relationship between food, hunger, and health.

Analysis: A phenomenological coding scheme and network analysis was developed based on themes emerging from qualitative data.

Results: The experience of food insecurity was related to violence and poor mental health. Women described 2 kinds of hunger: "hunger of the body" and "hunger of the mind." Hunger of the body referred to the outright painful sensation of hunger caused by insufficient funds. Hunger of the mind was related to trauma, encompassing feelings of depression and hopelessness. Both forms of hunger may be a physical manifestation of structural and interpersonal violence.

Conclusions and Implications: There is a need for a broader framework to examine the health effects of food insecurity that addresses women's safety, economic independence, and physical and emotional well-being.

Key Words: food insecurity, violence, hunger, women, qualitative methods, African American

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INTRODUCTION

Food insecurity, currently defined as the lack of access at all times to enough food for an active and healthy life, disproportionately affects female-headed households, households with children, and people of color. In 2005, 12.6 million households (11%) experienced food insecurity at some point during the year, primarily as a result of inadequate income to purchase food. Households headed by single females with children experienced food insecurity at 3 times this rate (31%). Moreover, African American households experienced food insecurity at almost 3 times the rate of white households (22.4% vs. 8.2%).[1]

Food insecurity among adults has been associated with multiple poor health outcomes, such as poor overall health,[2-7] poor mental health,[8-12] and higher rates of chronic disease with more severe complications.[13-16] In addition to unacceptably high rates of food insecurity, African American women suffer some of the worst burdens of disease and poor health compared to other groups in the United States. In the most recent food insecurity studies to date, mental health, exposure to violence, and chronic disease disproportionately affect African American women who are food insecure.[2,12] However, the *contextual* factors associated with their health in relation to food insecurity are still poorly understood.

Qualitative research is more likely to investigate the contextual factors of hunger. However, in North America, such qualitative studies that have included African American women have not distinguished African American women's experiences from those of other women.[17-18]

Aside from the qualitative work of the Manpower Dem-

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onstration Research Corporation (MDRC) program[17] and advocacy work of antihunger organizations,[19] there is a dearth of qualitative food security research on African American women who reside in inner cities. There has also been little investigation on the phenomenon of the relationship between food insecurity and health from the women who embody that relationship in everyday life. In addition, most food insecurity studies use cross-sectional study designs and measure the associations between food insecurity and health outcomes. Yet there is minimal ability to determine causality, or the local contexts that influence such associations.

In the middle and late 1980s, there was little consensus on the existence and experience of hunger in the United States and the potential health effects from lack of food. Through the ethnographic methods of participant observation and in-depth interviewing, Radimer and colleagues used a qualitative, phenomenological approach to investigate the experience of hunger among women in order to find ways of talking about lack of food from those who experience it the most.[20,21] From analyses of the themes and cognitive testing regarding standardized questions related to these themes, a measure of food insecurity grounded in a Rasch model was created and adopted by the US Department of Agriculture (USDA).[22] This USDA Household Food Insecurity Scale has since been included in national surveys. Each year, annual prevalence rates are officially released by the USDA.[1]

Since the development of the measure, other qualitative research has investigated the experience of lack of enough food in Quebec[23] and in Toronto.[4] More recently, in the United States, qualitative food insecurity investigations regarding adults have addressed the experience of food insecurity among the elderly[24-27] and among migrant farm workers,[28,29] as well as cognitive testing regarding the applicability of the US food insecurity scale in different cultural and linguistic contexts.[30] Most of this research has sought to develop ways to compare qualitative findings with the current quantitative USDA Household Food Insecurity Measure to investigate how adequately it measures lack of access to food.

Similar qualitative research has also been undertaken outside the United States. The drive behind this research has been to develop econometric and psychometric techniques for the purposes of estimating food insecurity across a wide range of a population.[31] This type of exploration is summarily important in light of the recent National Academies of Science report prepared by the special expert panel on food insecurity.[32] The report suggested that although food insecurity is essential to measure, the definition and measurement of hunger should be refined. This is especially the case given the current methods of calculating severe food insecurity, and, as the panel suggests, the emotional and political weight that the term "hunger" carries.

The emphasis of the special panel of the National Academies of Science was to scrutinize the measures used to quantify the experience of lack of food. This type of discourse on food insecurity is primarily concerned with estimating the magnitude within the population. The focus on measurement techniques for accurate population estimate has no real intention to understand hunger as an experience that "matters" to individuals. "Experience," defined by Arthur Kleinman, is the "flow of everyday interactions in a local world."[33] Experience is dependent on relationships with others; it is affected by social, cultural, and political processes, as well as with subjective states, such as emotions and memory. To highlight experience is to emphasize *what matters to individuals in their local world*, and the values that are embodied therein.[34] In current food insecurity discourse, the experience of lack of access to food or food deprivation, within the local context of lived human experience, is lost or ignored.

The investigation presented here went beyond the intention to crosscheck quantitative measures with qualitative definitions of hunger. It sought to characterize hunger qualitatively, without restriction to comparisons with the USDA food insecurity measure (for instance, what qualitative response fits or does not fit with a concept currently used), and it sought to investigate women's explanatory mechanisms for the relationship between lack of access to food and their own health.

This study used a phenomenological approach. In qualitative research, a phenomenological investigation is grounded in the analysis of everyday, lived experience.[35] Thus, this investigation sought to understand food insecurity and hunger in the somatic, local, and valued experiences described by low-income African American women.

A phenomenological approach was chosen for this investigation because the experience of food insecurity and hunger is, at its core, an experience of suffering. The depiction and understanding of physical and social suffering demands a kind of inquiry that privileges lived experiences to the point where one cannot deny their moral implications.[36-37] In an effort to resist reducing the suffering of hunger to a medical illness or a social pathology, the study described here sought to ground its inquiry in lived experience to understand the relationship between food insecurity and health in ways that matter to individuals. As previously stated, African American women experience some of the highest rates of food insecurity in the United States. From the theme analysis of their narratives, a conceptual model of the relationship between food insecurity and poor health was created.

METHODS

Participants were recruited from 3 food pantries in north Philadelphia between May 2002 and January 2003. Food pantries are church- or community-based emergency feeding programs that provide free food packages (groceries) to low-income people in need. They are generally open 1 day a week, and they may often limit the use of their food cupboard to once a month by each of their clients. A total

of 34 women participated in either a focus group or in an individual interview. Four separate focus groups and 12 individual, in-home interviews were carried out. Focus groups lasted 2 hours, and duration of individual interviews ranged between 90 minutes and 3 hours. Food pantries included as sites for the study were associated with an African American church. These churches and other faith-based organizations carry a large part of the burden of providing food and are an important contributor to the informal charitable food system in Philadelphia.

Investigators volunteering at the food pantries recruited participants using a chain sampling (snowball) technique that works through the social networks of research participants to recruit other research participants.[38] This was the most appropriate method to use because of the difficult-to-reach population, most of whom did not have consistent phone service and had frequent household moves. This nonrandom sampling technique was also used because the purpose of the study was to understand the complex phenomena rather than to generalize the findings to the wider population. It is commonly used in qualitative research with the poor and underserved.[39]

Before the groceries were distributed to food cupboard clients, the study was explained, and people indicated interest. Women who expressed interest in the study were immediately scheduled for follow-up home interviews or participation in a focus group. Inclusion criteria were females aged 18-60 years who received groceries at a food pantry 2 or more times in the past 6 months. Participants were asked to identify other women they knew who satisfied the inclusion criteria, who could then be recruited by the investigators. Participating food pantries received honoraria of $100 for their feeding programs, and each woman received supermarket gift certificates of $15 (focus group) or $25 (individual interview). Each participant, in both the focus groups and the individual interview sessions, also answered a brief questionnaire that included demographic characteristics, food stamp participation, and the US Department of Agriculture Household Food Security Scale—Short Form.[40] Food Insecurity was calculated according to established methods.[22] Terminology of food insecurity categories was recently changed by the US Department of Agriculture.[1] We present results using traditional terminology to more accurately compare qualitative and quantitative results.

A total of 22 women participated in the 4 focus groups. The focus group leader was a registered nurse/health educator and was trained by the first author. In addition to observing each focus group, the first author also conducted the 12 individual in-home, open-ended interviews. All sessions were tape recorded and transcribed. The purpose of the final focus group was to engage the participants in a "reciprocal" discussion, to cross-check and verify the qualitative analysis to date. This methodology is generally practiced in the ethnographic disciplines of anthropology and folklore to ensure cultural understanding, participation, and to ensure validity of the analysis.[41,42] The same set of semi-structured interview questions was included in the focus groups and in individual interviews (with multiple follow-ups and probes in both settings). Table 1 provides examples of questions related to this manuscript.

The university's Institutional Review Board granted ethical approval for the study. For confidentiality, the names of the participants quoted in this paper are pseudonyms. Results were entered into Atlas.ti 4.2, (London, UK: Scolari, Sage Publications Software, 2000), a qualitative research software program, to aid with theme coding and network analysis.[43] Atlas.ti is a software program designed to assist in the management and analysis of qualitative data, ranging from storing and retrieving interview data, to developing theoretical models. This system also works with interpretive memos written by the investigators to develop codes and definitions of codes to compare coded material within and across focus group and interview transcripts; to organize transcripts into "families" in order to compare the presence or absence of themes across and within groups; and to create visual displays of the relationships between codes (called "network views"). The 3 different analysts (the first author and 2 research assistants) used a constant comparative analysis (also termed grounded theory[44]) to categorize themes ("codes") naturally occurring in the recorded interviews and focus groups. Once the analysts agreed on a master code list, these codes were entered into the Atlas.ti program. Recurrent themes that emerged from the interviews were then categorized into larger code sets (supercodes) to analyze relationships between codes in order to develop a network of theme relationships. Through this process was built an interpretive framework to understand the experiences and to develop a theoretical understanding of lay perspectives on the interconnectedness of hunger and health.

Although it was not an intention of this study to test associations between qualitative aspects of hunger and the USDA Household Food Insecurity Scale, the food insecurity category is still an important characteristic to include. The characterization of participants should be viewed with caution. The timing on the quantitative question is 12 months. The qualitative narratives regarding hunger and

Table 1. Selected Sample of Question Guide for Focus Groups and Individual Interviews

What are some of the hardships you face when trying to feed your family?
Let's talk about the idea that there is a connection between food and your health and your family's health. What food items make you feel good? Why? What food items make you feel bad? Why?
Sometimes in the hardships of daily life, it is hard to make sure that you eat, and that your family eats well. What does it feel like when it's hard to find and prepare food you would like to eat?

food insecurity were not conditioned on time, but rather on the experience—whenever it happened throughout the life course. The criterion for inclusion into this study was having used a food pantry at least twice in the past 6 months. Use of emergency food is often an indication of lack of access to food in "socially acceptable ways," and thus, by definition, all women in the study were potentially food insecure. Finally, the scale is not meant to be accurate on an individual basis, nor is it a clinical screen. The measure can be used strictly to produce accurate *population estimates*.[22]

RESULTS

Sample characteristics are shown in Table 2. Women's ages ranged from 25 to 60 years, with an average age of 45. The majority of the women received food stamps, were food insecure, and rated their health as either fair or poor. About half of the women cared for children in the home, with several others occasionally caring for children on weekends, or for pay on an informal basis.

Two major themes related to hunger emerged from the analysis of the interrelationships of codes: (1) the physical experience of hunger owing to lack of economic resources, and (2) the emotional experience of hunger that manifests physically through loss of appetite or nervousness. In the women's own terminology (their insider, or "emic" point of view), these forms of hunger are "hunger of the body" and "hunger of the mind." Data on these 2 forms of hunger are presented here.

Hunger of the Body: When You "Can't Lay with Yourself Comfortable"

The experience of hunger was described as a physical, "bodily" sensation that caused great discomfort and physical pain. It was sporadic and also related to eating poorly. Episodes were usually associated with extreme circumstances, for example, periods of homelessness or drug addiction. The majority of the women (n = 28) explained they experienced hunger because they could not afford food. Mona described her experience when she was asked if she had ever experienced hunger. Through tears she explained:

> "My *refrigerator was so empty. I was so hungry. I went inside the market. I had to put food back because I didn't have enough* [money] *to get what I needed for my body.*"
>
> (Mona, age 43, food insecure with hunger)

Table 2. Selected Demographic Characteristics*

Demographic & Health Characteristics	All N = 34		Food Secure N = 7 (21%)		Food Insecure (without hunger) N = 13 (38%)		Food Insecure (with hunger) N = 14 (41%)	
	N	(%)	N	(%)	N	(%)	N	(%)
Education								
Less than high school/GED	16	(47)	2	(6)	5	(15)	9	(26)
More than high school/GED	18	(53)	5	(15)	8	(24)	5	(15)
Employment								
Full-time work	2	(06)	2	(06)	0	(0)	0	(0)
Part-time work	3	(09)	1	(03)	0	(0)	2	(06)
Not working	29	(85)	4	(12)	13	(38)	12	(35)
Caring for children								
No children	18	(53)	4	(12)	5	(15)	9	(26)
One or more children	16	(47)	3	(09)	8	(24)	5	(15)
Food stamps								
Receiving	22	(65)	1	(03)	11	(32)	10	(29)
Not receiving	12	(35)	6	(18)	2	(06)	4	(12)
Self-rated health								
Good/very good/excellent	15	(44)	5	(15)	5	(15)	5	(15)
Fair/poor	19	(56)	2	(06)	8	(24)	9	(26)
Weight								
Underweight (BMI < 18.5)	2	(06)	1	(03)	1	(03)	0	(0)
Normal (BMI 18.5-24.9)	12	(35)	2	(06)	5	(15)	5	(15)
Overweight/obese (BMI > 25)	20	(59)	4	(12)	7	(21)	9	(26)

*Some total percentages may not be equal to 100% due to rounding up or down for whole numbers.

She linked her experience of hunger with an empty refrigerator, physical hunger, and lack of money, all of which come together as a need for her body.

Celeste describes her experience of hunger as one of the lowest points in her life. She was homeless and pregnant. She describes it as having nothing, and insisted that she "knew" what hunger was.

> *"I remember when I was pregnant with my daughter I was living without* [running] *water for 6 months. I used to eat chicken wings and a hoagies everyday.* [A hoagie is a Philadelphia-specific "submarine sandwich," or a sandwich on a thick roll with processed meat (such as salami or ham), cheese, lettuce, tomatoes, and oil.] *So I know the meaning of struggling.* [. . .] *I was pregnant. And half the days I didn't eat, and the other half of the days I did. So, I know the meaning of being hungry and wanting food, being without lights, and being without water, and being without gas. I know the struggling parts of wanting nourishment and substance in your body."*
>
> (Celeste, age 25, food insecure with hunger)

Her description of hunger here is a type of intermittent hunger, where she was able to eat sometimes, and other times not. Celeste draws attention to the nature of her struggle with hunger, or lack of substance in the body, which not only affected her, but her unborn child. While Celeste addressed the lack of adequate housing as related to the deprivation of hunger and lack of substance in the body, Juleen explains her experience with hunger as if the hunger in the body affected her ability to simply carry out activities of daily living.

> *"I know how it feels to be so hungry until you feel like you can't walk, you can't sit, you can't lay with yourself comfortable. And I know how it also feels to be so hungry, you feel like you'd eat just about anything."*
>
> (Juleen, age 48, food insecure without hunger)

A common factor in these typical experiences of Mona, Celeste, and Juleen is the physical impact of hunger on the body and the way hunger interrupts sleep and the activities of daily living. These experiences include the desire to eat food, the need for "substance" and nourishment, and the frustration at not being able to acquire food owing to lack of money and deprivation of other necessities such as housing and utilities.

Hunger of the Mind: "When I Get Upset, I Don't Eat"

The relationship between hunger and health also included how food deprivation was a physical experience that could be attributed to the psychological and emotional anguish related to the stresses of poverty, ill health, and exposure to violence. Using the terminology of the women after analysis of multiple codes related to this experience, this theme was termed "hunger of the mind." This term is grounded in the words used by the women in their narratives. Through the analysis of coded themes, it was found that within this broad category of "hunger of the mind," there were 3 subcategories that related to this area of the hunger experience: (1) stress and depression; (2) deliberate (self-inflicted) hunger; and (3) violence and the inability to eat.

Stress, depression, and the need for "spiritual food." The inability to eat because of stress was a common theme in the narratives. Women identified a range of stressors including welfare work requirements, rude or unhelpful caseworkers, the everyday hardships of being poor, having young or teenage children, mourning the loss of a loved one, having friends and neighbors with equally stressful lives, and safety concerns related to living in violent neighborhoods.

The comments of Tress and Yolanda were typical. At the time of her interview, Tress was living with her young adult son, and she was unemployed. She explained she was currently earning cash through sex work. She described multiple health problems, but explained she had no health insurance. She sought health care at the free women's clinic only when she saw something as urgent. When Tress was asked about how she saw the relationship between food and her health, she described her inability to eat or to "hold in food." She explained that this situation was related to her sense of chronic, extreme stress.

> *"Nothing* [is stressing me] *except welfare. They had me come up there 3 times and then they finally tell me that my son makes too much* [money to justify getting food stamps]. *Yeah! That's really stressful. That's when you think you're going to get it that day, because you bring everything* [necessary documents] *they say to bring. Yeah, I guess the bills more or less. That's how I feel a little. And that's probably why my stomach ain't be holding the food."*
>
> (Tress, age 40, food insecure with hunger)

Here, the stress of applying for food stamps, the very program that would help alleviate her food insecurity, caused Tress to feel stress to the point of not being able to eat. This was Yolanda's experience as well:

> *"When you ain't got food, you get depressed, and you stressed. Because you stress yourself trying to figure out how you going to get it. How you going to get it, that's the biggest thing. Who I'm a call, where's I'm a go, what I'm a get."*
>
> (Yolanda, age 55, food insecure with hunger)

Living in highly stressful and depressive circumstances was also perceived to exacerbate the existing chronic conditions of some women, particularly the type of gastrointestinal pain described by Tress. From her perspective, her emotional stress and the way she coped with the stress led her to develop an ulcer.

"[The ulcer] doesn't bother me unless I'm sick or nervous. I think more or less when I'm nervous. I hold in too much [emotion] *and then it starts. Like you know how you wanna get things* [feelings] *out and you just let it go and it builds up and builds up? Yeah, that's when I think it really messes with me. Because I really didn't know until I was holding in too much stuff and then I started having pains and called the doctor."*

(Tress, age 40, food insecure with hunger)

Similar descriptions with stress, loss of appetite, and inability to eat emerged in 11 of the 12 individual interviews and in 3 out of the 4 focus groups during the discussions regarding the relationship between food, hunger, and health.

All but one woman acknowledged the use of faith-based food pantries and their associated churches as providers of important spiritual, social, and mental support. Services such as prayer, social interaction, clothing, and necessities such as laundry detergent and toilet tissue were provided. The notion and importance of "spiritual food" as an accompaniment to food for the body is made by Wilma, who said,

"I like to go to [the food cupboard] *because you go there and you get food for your body and you get spiritual food. They sit down and they talk to you and if you have a problem they talk to you and they pray with you."*

(Wilma, age 50, food insecure without hunger)

Several other women expanded on this notion to include contact with the nonjudgemental approaches of pantry staff. Wilma continues to illustrate this point.

[The food pantry volunteers] *are nice and respectful. And a lot of them, well some of them, are church people. When you go to* [X Pantry] *they have a Sunday service. One thing about* [X pantry] *is that you can go to the church dressed as you are anytime. You come in they're nice and friendly, they shake your hand and take time to talk to you. And when you go there on Sundays they have people to pray for you and different people you can talk to.*

(Wilma, age 50, food insecure without hunger)

Deliberate hunger. Qualitative results regarding the relationship between food and health also suggested that hunger might be self-inflicted. Some women purposefully did not eat because of stress or depression. Noreen explained that she purposefully did not eat because of depression associated with a recent cancer diagnosis. Lack of health insurance to receive appropriate treatment was compounded by employment difficulties and economic hardship.

"I've been hungry, because I haven't had no food in the house. And not for more than a day—I've been hungry for as long as 2 or 3 weeks, drinking water. So I call it fasting. I know what hunger is."

[. . .] *Interviewer: When you don't have any food and all you're doing is drinking water, what else is going on in your life at the time?*

"I've been under a lot of mental stress lately. So at that I, I really didn't eat. Because at that time, I was truly thinking of suicide. So by not eating, I thought maybe I would die faster."

(Noreen, age 46, food insecure without hunger)

Prior to this interview, Noreen explained, she had lost her job and did not have enough money for food. However, the primary cause of this period of hunger involved "mental stress." This was the only instance of an expressly suicidal relationship with hunger, however it resonated with other focus group members who recognized the emotional anguish connection to hunger experiences. In response, Noreen, Harriet, and Jackie concurred.

"When you go through traumas like this one [Noreen's suicide ideation], *you sit back as if your nerves are just running all through your body—even down in your stomach."*

(Harriet, age 48, food insecure without hunger)

"It's not even about food of the body. But it's food of the mind. And I go through anxiety first."

(Jackie, age 55, food secure without hunger)

The consequences of intentionally not eating may be serious and require hospitalization. In one extreme case, Letty, a 53-year-old mother of 3 "grown children" and various adopted children, described herself as *"too weak to get up off the sofa."* When her teenage son arrived home one day, she was laying unconscious on the sofa. Her son called for emergency assistance, and she was treated in hospital for malnutrition and dehydration. Letty summed up her malnutrition experience as "*when I get upset, I don't eat.*"

Violence, stress, and hunger. The theme analysis suggests that exposure to various forms of violence and stress resulted in a range of physical and mental consequences (weakness, dizziness, seizures, anxiety, and sleep disorders). The themes of violence in all its forms emerged in the individual interviews, whereas in the focus groups, community violence was the only type of violence discussed. Coping mechanisms in response to traumatic events ranged from deep spiritual or religious conviction to relying heavily on alcohol, tobacco, and drugs. Both the consequences and coping mechanisms had an impact on the ability to eat. Few women had access to mental health professionals, and the majority viewed their depression as something that a mental health professional could not treat. Some women expressed disdain for mental health care providers, or they explained they had a difficult time accessing providers in the mental health system. The comments of Rita and Juleen were typical and are likely symptomatic of posttraumatic stress disorder.

"I think, for a while, that [witnessing someone being beaten] *is what caused me to really get this acid reflux and anxiety. And anxiety more or less eats on your stomach, you know, because that's your nerves."*

(Rita, age 54, food secure)

"That was the first time that I got raped and that was the first time that I went to see a psychiatrist, too. I couldn't eat and I couldn't sleep [. . .] *That feeling was like I went to sleep and I woke up and all my feelings were gone. I couldn't laugh, I couldn't cry, I couldn't smile. I was like looking at myself in a dream."*

(Juleen, age 48, food insecure without hunger)

In other instances, women explained how their abusive partners attempted to manipulate them with food, using it to buy their way back into an abusive relationship, or as a prop in the process of outright sexual violation. Stress associated with childhood violence continued to be an issue for some women in this study and may "explain" current adult addictions. For example, after being *"sold for sex"*at age 8 by her mother, Tinisha developed a drinking problem as an adult. She started drinking at age 9 to "*wipe away the pain*" and has subsequently developed cirrhosis. In the ensuing discussion about the relationship between food and health, she explained that she drank beer in order to tolerate the experience of eating.

I just can't eat. [. . .] *I bring all of it right back up. So, 'til the beer's gone I just don't eat. Once the beer's gone, that's when I eat.*

(Tinisha, age 42, food secure)

There may also be a layering or cumulative effect with multiple experiences of stress or violence contributing to a limited food intake for some women. For example, coupled with her traumatic childhood, Tinisha's inability to eat is also related to an episode of sexual violence as an adult when she was raped and forced to have oral sex by a group of men who were waiting outside the supermarket. She describes her difficulty in coping with that situation:

It took me a long time before I could eat food, because that [getting raped] *was all I could think about. I think I went down to about 98 pounds or something. Looked like I was dying. Because every time I go to eat or swallow something I just thought about what they did.*

(Tinisha, age 42, food secure)

Coping with these traumatic experiences and difficulty eating are especially hard for her to manage given that she was currently caring for her 4-year-old daughter and attempting to regain custody of her 9-year-old son.

Each of these dimensions of hunger of the mind was associated with the physical symptoms of hunger, as well as a notably negative experience with food altogether. Moreover, the experience of hunger itself contributed to stress.

DISCUSSION

"Food of the body" (food needed to satisfy hunger) is only a part of the experience of hunger for the women in this study. The discussions regarding the relationship between hunger and health demonstrate that hunger was more broadly defined. It was this other dimension of "hunger of the mind" that exacerbated the hunger of the body. Though both types of hunger appear interrelated, given the multiple traumatic and stressful experiences of the women, it is this "other" type of hunger that received the most emphasis. Stress relating to past episodes of violence and the resultant feelings of depression, physical illness, and mental illness clearly *mattered* to the women.

Recent quantitative studies have also highlighted that the physical experience of hunger interconnects with aspects of mental well-being (anguish, stress, depression, and post-traumatic stress) to adversely affect health.[4,9,45] Work in Massachusetts found homeless and low-income–housed mothers (N = 408) of preschool and school-aged children who report severe hunger were more likely to have been diagnosed with posttraumatic stress disorder.[45] Higher odds of major depression and distress were reported by individuals from food-insufficient households in a nationally representative Canadian dataset.[4] In addition, mothers' childhood sexual molestation was found to be a significant predictor for adult hunger.[12] Finally, in a 3-year longitudinal study of welfare recipients (N = 753), changes in food sufficiency were strongly related to changes in a measure of depression.[9] The clear connection between mental health and hunger in the narratives of these women interviewed in Philadelphia is resonant with what is found in quantitative analyses based on the USDA scale when investigated in tandem with quantitative mental health indicators.

There are far fewer qualitative studies that examine this area, with a few exceptions. The notion of the dual nature of hunger and its impact on physical *and* mental health has been described in the anthropological work on malnutrition by Scheper-Hughes.[46] In their dialogues about hunger, her female informants would describe *nervos* (nerves) and *fome* (hunger) as if they were one and the same. When attempting to find the difference, Scheper-Hughes found that *nervos* were described as a response to an anxious sensation of being poor and weak. The weakness (*nervos)* was often characterized as being related to not having enough food because of scarce resources, whereas hunger was an experience in the belly that was caused by lack of food (*fome*).

These hunger and nerves experiences were a part of what Scheper-Hughes typified as everyday forms of violence, caused by systematic and often chaotic experiences ranging from violence within their own households to brutality commonly used by the local police, to the systematic discrimination and abuse by the state that ignores the plight of poor women and children. Thus, according to Scheper-Hughes, the dual nature of the hunger experience is itself a type of everyday, systematic violence. Such violence interwoven into examples of hunger and emotional anguish in Brazil is similar to the experience of

hunger described by the women interviewed in this Philadelphia study.

Scheper-Hughes found the hunger experience to be a dual experience of physical pain and emotional anguish, whereas others have found a causal relationship between hunger and poor mental health. Hamelin and Habicht found through their qualitative research that psychological suffering, such as stress, may be a consequence of food insecurity among low-income households in Quebec.[23] Physical manifestations for respondents included lack of concentration or low work capacity, whereas stress was a psychological consequence related to lack of food access. Stress reactions ranged from decreased interest in food to the fear of losing custody of a child.

Our Philadelphia study raises several issues. Although *hunger of the body* is a concept that may be readily understood to relate to the painful sensation of lack of food (caused by lack of economic resources) and its health effects, the women's descriptions of the multifaceted dimensions of *hunger of the mind* deserve greater consideration. It has been suggested that food insufficiency is one dimension of a more pervasive vulnerability to a range of physical, mental, and social problems among economically constrained households.[4] With this idea in mind, the emergent themes derived from the women's narratives were used to construct a conceptual framework for understanding the experience of food insecurity and poor health. The Figure shows food insecurity as a box containing 2 components: hunger of the body and hunger of the mind. Both types of hunger interact with each other and may contribute to poor nutrition and ultimately compromised health. The qualitative data in this study suggest that poor appetite and poor coping mechanisms (such as alcohol and drug addiction) are responses to hunger of the mind, which may have an impact on nutrition. Moreover, given the existing evidence shown here, lack of access to mental health care leaves women more vulnerable to more severe psychosocial problems or "hunger of the mind."

The women's emphasis on hunger as a psychosocial experience suggests that the current food insecurity scale is not able to capture the full magnitude of the hunger experience in the United States. The commonly used USDA food insecurity measure captures the experience *owing to the lack of resources*—that is, it captures only the economic hardship associated with what the participants might call the "hunger of the body." Researchers at the USDA acknowledge that there are many limitations to the food insecurity measure, especially in that it does not address availability of food through socially acceptable channels such as emergency food pantries, nor does it capture anxiety related to lack of food.[22]

Recent attempts have been made to capture the intersection between mental health and food access using alternative approaches. The duality of the hunger experience, in the physical experience (caused by the lack of economic resources) and the psychological experience, was also captured in a mixed method approach in Tanzania used among female caretakers (N = 449) in rural Tanzania.[47] Modified versions of the USDA food security module combined with the Hopkins Symptoms checklist (an instrument designed to measure the symptoms of anxiety and depression) were used to demonstrate a strong association between food insecurity and maternal anxiety and depression. Other creative approaches to capturing the locality of the hunger experience have been used

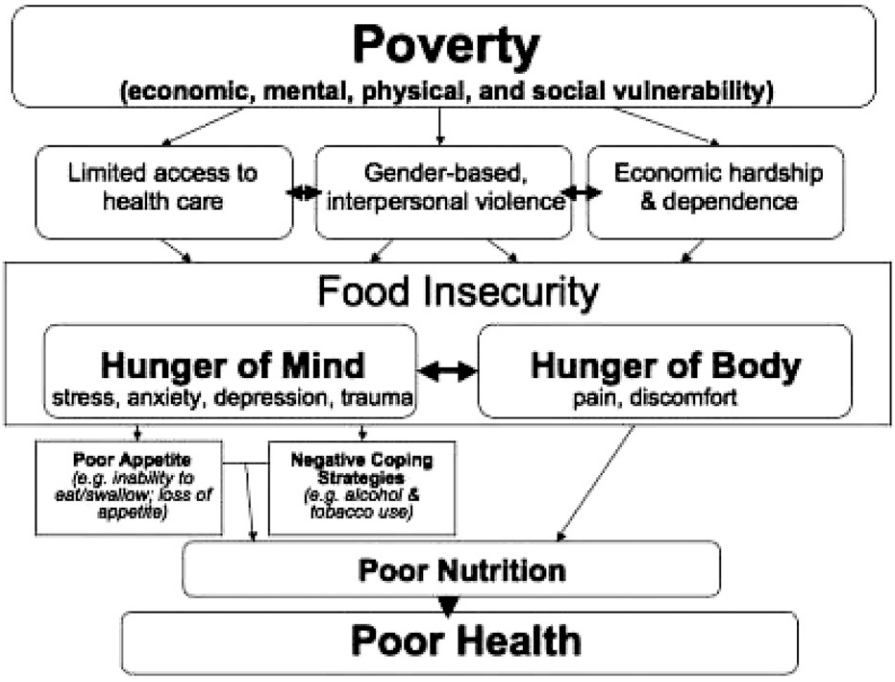

Figure. Conceptual framework for hunger of body & hunger of mind.

in Africa. A combination of quantitative and qualitative measures was used to develop and validate an "experience-based" measure of the access component of household food insecurity in Northern Burkina Faso.[48] These examples of alternative measurement may offer some newer ways to develop a more comprehensive, whole-person/whole-experience–centered measurement. The present study indicates a strong association between poor mental health and food insecurity that should encourage the development of improved measures of food deprivation that go beyond economic resources and access to food itself.

According to Drèze and Sen, hunger is not limited, nor dependent on, the lack of available food, nor only on access to economic resources. It is, rather, a sign of "entitlement failure."[49] Entitlements are ways through which people can secure their means of subsistence. Such entitlements might include jobs with "living wages"; ownership of land, home, and automobile; social security and unemployment insurance; equal treatment in the home and on the job; education; and access to and insurance for health care. In this study, the reasons for women's "hunger of the mind" were involvement in violent intimate relations, having been abused as a child, the stresses of poverty and of negotiating the system, and lack of access to mental health care. Clearly these causes of "hunger" stretch beyond the basic concepts of "enough money to buy food" and food itself. Thus, women, especially African American women, who experience high rates of food insecurity, need more supports and more coordinated supports based on entitlements, which may include such supports as those that encourage economic freedom from abusive relationships, more family supports, and a welfare system that is more client-friendly. These welfare supports may be just as important as the supports being negotiated with the next Farm Bill reauthorization, where funding for food stamps and associated policies regarding food for the poor and underserved are decided. Moreover, welfare to work policies and programs related to maternal disability (caused by depression and/or exposure to violence) will also need just as much attention as those issues of minimum wage, child care, and affordable housing.

LIMITATIONS AND FURTHER RESEARCH

This study has several limitations. The small convenience sample and data collection from a localized population may reflect patterns specific to women who use a cluster of food pantries in Philadelphia. The women's descriptions of the concept of "hunger of the body" or the mental and spiritual aspects of hunger may be localized. The participants were recruited through the food pantries, and thus the relationship between chronic use of the food pantries and relying on food pantries for support, may not be a common experience for women who do not use such mechanisms of support. As with all qualitative studies, results may have been biased by the set of questions asked, as well as by the analysis. Although results were cross-checked and coded by 3 separate analysts, there were no men involved in the assessment. Therefore, it is also possible that the results described here are a female-specific interpretation. Further research is needed to understand the differential dimensions of the hunger experience for men and women of other disproportionately affected populations; expand the definitions, measures, and responses to food insecurity to include those supposedly non-food-related issues that affect health; and develop and refine frameworks to examine the mental health effects of stress, anxiety, violence, or traumatic experiences and hunger.

CONCLUSION

This study demonstrates that African American women describe that their hunger experiences have not only a physical dimension, but also a psychological one. The hunger of the mind affects them physically—in the gut, in the way they treat their bodies, and in their ability to function. Mental health effects owing to stress of poverty, anxiety, and violence or trauma may make up part of the wider experience of food insecurity and contribute to the association between food insecurity and poor health. These data have assisted in the development of a conceptual model that broadens the understanding of the experience of hunger within food insecurity research. The victimization of women and the feminization of poverty are clearly playing a large role in the hunger and poor health of African American women. If one is to measure something as fundamentally necessary to a healthy, thriving human experience such as access to enough food at all times for an active and healthy life, then the breadth of the experience of deprivation from food deserves to be explored, acknowledged, and treated comprehensively. Thus, the interventions for food insecurity must not only call for greater access to food stamps, to grocery stores, and to jobs with a minimum wage, but also for the economic independence of women, family-centered interventions for at-risk children (to assist children who may have been abused), and a welfare system that is attuned to the central importance of supports for women, and women at risk for depression, violence, and food insecurity.

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