HHS Public Access

Author manuscript

Soc Sci Med. Author manuscript; available in PMC 2021 November 02.

Published in final edited form as:

Soc Sci Med. 2020 November ; 265: 113492. doi:10.1016/j.socscimed.2020.113492.

Exploring the role of social capital in managing food insecurity among older women in the United States

Anna M. Leddy[a,*], **Henry J. Whittle**[b], **Jacqueline Shieh**[c], **Catalina Ramirez**[d], **Ighovwerha Ofotokun**[e], **Sheri D. Weiser**[f]

[a]Division of Prevention Science, Department of Medicine, University of California, San Francisco (UCSF), 550 16th St., 3rd Floor, San Francisco, CA, 94158, USA

[b]Centre for Psychiatry, Wolfson Institute of Preventive Medicine, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, Charterhouse Square, London, EC1M 6BQ, UK

[c]Institute for Global Health Sciences, UCSF, 550 16th St., 3rd Floor, San Francisco, CA, 94158, USA

[d]School of Medicine, University of North Carolina at Chapel Hill, 130 Mason Farm Road, Chapel Hill, NC, 27514, USA

[e]School of Medicine, Emory University and Grady Healthcare System, 201 Dowman Drive, Atlanta, GA, 30322, USA

[f]Division of HIV, ID and Global Medicine, Department of Medicine, UCSF, 995 Potrero Ave, Building 80, Ward 84, San Francisco, CA, 94110, USA

Abstract

Food insecurity, which affects 37 million individuals in the United States (U.S.) and disproportionately burdens women, minorities and older adults, is a well-established determinant of poor health. Previous studies suggest social capital, defined as the material and social benefits arising from relationships among individuals within and between groups, may be protective against food insecurity. Drawing on this evidence, calls have been made for interventions and policies to promote social capital to address food insecurity. However, limited research has explored in-depth how social capital shapes the lived experience of food insecurity in the U.S. We explored how older women from three settings in the U.S. used forms of social capital to navigate their food environments. Between November 2017–July 2018, we conducted 38 semi-structured interviews with food-insecure women aged 50 years or older enrolled in the Northern California, Georgia, and North Carolina sites of the Women's Interagency HIV study, an ongoing cohort study of women living with and at risk of HIV. Interviews were analyzed using an inductive-deductive approach. Women from the three sites explained how they drew upon different forms of capital to

*Corresponding author. 550 16th St., 3rd floor, San Francisco, CA, 94158, USA. anna.leddy@ucsf.edu (A.M. Leddy).

Author contributions

Anna M. Leddy: Conceptualization, Methodology, Investigation, Formal analysis, Writing - original draft. Henry J. Whittle: Conceptualization, Methodology, Formal analysis, Writing - review & editing. Jacqueline Shieh: Investigation, Formal analysis, Writing - review & editing. Catalina Ramirez: Investigation, Writing - review & editing. Ighovwerha Ofotokun: Resources, Writing - review & editing. Sheri D. Weiser: Supervision, Conceptualization, Funding acquisition, Methodology, Resources, Writing - review & editing.

access food. Women in Georgia and North Carolina depended on support from members within their social group (bonding social capital) to address food insecurity but described limited opportunities to build relationships with members from other social groups (bridging social capital) or representatives of institutions (linking social capital). In contrast, women from Northern California frequently used bridging and linking social capital to access food but described limited bonding social capital. Findings show how the role of social capital in protecting against food insecurity is diverse, complex, and structurally determined. Intervention implications are discussed.

Keywords

Social capital; Food insecurity; United States; Women

1. Introduction

Food insecurity is prevalent in the United States (U.S.) and is associated with suboptimal health outcomes. In 2018, 1 in 9 households in the U.S. were food insecure (Coleman-Jensen et al., 2019), which refers to having uncertain or limited access to adequate food (National Research Council, 2006). Food insecurity disproportionately affects female-headed households, adults living alone, adults with disabilities, Black and Latinx households and low-income households (Coleman-Jensen and Nord, 2013; Coleman-Jensen et al., 2019). Older adults also experience high levels of food insecurity. Between 2001 and 2018, the number of adults in the U.S. aged 50 years or older who were food insecure nearly doubled to 9.8 million (Gundersen and Ziliak, 2020; Ziliak and Gundersen, 2020). This number has drastically increased due to the coronavirus disease 2019 (COVID-19) pandemic and the subsequent social-distancing policies that have left millions of Americans unemployed and unable or unwilling to access food reliably due to fears of viral exposure (Leddy et al., 2020; United States Census Bureau, 2020).

Food insecurity has been shown to have detrimental effects on health including increased risk for HIV (Weiser et al., 2011), substance use (Whittle et al., 2019), and depression (Leung et al., 2015). Evidence also suggests a bidirectional relationship between food insecurity and aging outcomes among older populations. Food insecurity increases individuals' risk for chronic diseases such as diabetes mellitus (Seligman et al., 2007) and cardiovascular disease (Seligman et al., 2010), likely through increased consumption of cheaper, energy-dense foods, and through competing demands between food and healthcare costs that prevent people from adhering to their treatment and care plans (Drewnowski and Darmon, 2005). At the same time, experiencing multiple chronic diseases predicts food insecurity among older adults (Jih et al., 2018). This finding may be due to loss of income associated with chronic disease and disability, which can compromise one's ability to afford high quality or enough food. Many chronic diseases also limit mobility and energy, which can prevent individuals from accessing food resources in the community or preparing nutritious meals within their homes. By the same token, food insecurity has been found to be a risk factor for and a consequence of frailty among older adults (Bartali et al., 2006; Lee and Frongillo, 2001).

Given the high burden of food insecurity in the U.S, and its detrimental effects on health, research is needed to explore possible avenues of intervention. Prior research suggests that social capital may have a protective effect against food insecurity (Martin et al., 2004). Social capital refers to the relationships among individuals within and between groups, and the potential material and social benefits and obligations associated with those relationships (Bourdieu, 1986; Hawe and Shiell, 2000; Moore and Kawachi, 2017). Social capital has been shown to be inversely associated with food insecurity, including among older populations (Dean and Sharkey, 2011; Martin et al., 2004; Walker, 2007). For example, a study of low-income households in the U.S. found that households living in communities with high social capital were 52% less likely to experience hunger than households living in communities with low social capital (Martin et al., 2004). Drawing on this evidence, calls have been made to implement interventions and policies that promote social capital in communities as a way to improve food security (American Dietetic Association, 2010; Denney et al., 2017; Martin et al., 2004). However, limited research has documented the mechanisms through which social capital may shape older women's experiences of food insecurity in the U.S. Such research is needed to provide insights into whether and how social capital should be harnessed to address food insecurity among this population.

1.1. Theoretical framing

In this study, we draw upon the concepts of social capital and symbolic violence to understand older women's experiences of food insecurity in the US. The literature on social capital distinguishes two conceptualizations of the construct: the social cohesion/communitarian definition and the network definition (Kawachi, 2006; Moore and Kawachi, 2017). The cohesion/communitarian definition conceptualizes social capital as a group attribute and refers to resources such as trust, norms, social control, and mutual assistance available to members of a community (Kawachi, 2006; Moore and Kawachi, 2017). The network approach defines social capital in terms of resources such as information and instrumental support within an individual's social network (Kawachi, 2006) and uses social network analysis to measure social resources and networks (Moore and Kawachi, 2017). In the present study, we draw upon the cohesion/communitarian approach to conceptualize social capital. This approach distinguishes three key forms of social relationships within and between groups that determine the amount of social capital a group has: bonding, bridging and linking social capital (Moore and Kawachi, 2017; Szreter and Woolcock, 2004). Bonding social capital refers to trusting and cooperative relationships within groups that share similar sociodemographic characteristics (Moore and Kawachi, 2017). Bridging social capital describes social resources accessed across groups of different social identities or standing (Moore and Kawachi, 2017; Szreter and Woolcock, 2004). Social groups with bridging social capital are able to mobilize their group resources to enhance the group position and access additional resources held by other social groups. Finally, linking social capital refers to relationships of mutual respect and trust among people across levels of institutionalized power or authority (Moore and Kawachi, 2017; Szreter and Woolcock, 2004). Examples of linking social capital can be found in relationships between marginalized communities and representatives of institutions of power including health care workers, social workers, and law enforcement officers among others.

Evidence suggests that all three forms of social capital may lead to improved health outcomes, however, they may also contribute to negative health outcomes, particularly bonding social capital (Moore and Kawachi, 2017). For example, while strong bonding social capital can have benefits such as feeling a sense of belonging or trust, Alejandro Portes' work highlights the downsides of social capital. Portes posits that strong social bonds can place excessive demands on group members to support each other and can result in extreme social control, exclusion of out-group members, and "down-levelling" of norms, in which pressure to conform to group norms keeps members of oppressed groups in place and forces ambitious members out (Portes, 1998). Other work has revealed additional negative effects of social capital including the enforcement of norms that promote risky health behaviors (e.g. high-risk sex, substance use), as well as 'cross-level interactions' whereby individuals whose levels of trust are at odds with the social capital in their community experience worse health outcomes (Villalonga-Olives and Kawachi, 2017). The expectation to support others may be a particularly relevant downside of social capital for food insecurity, as such an expectation could cause serious financial and mental strain, especially in communities with limited resources.

At the same time, reliance on support from others, especially in the U.S. context, where self-sufficiency and individualism are highly valued, could also produce feelings of shame and self-blame (Reutter et al., 2009; Whittle et al., 2017). This point is tied to Pierre Bourdieu's theory of symbolic violence, which argues that social inequities are reproduced through tacit (mis)understandings by dominant and dominated groups that these inequities represent the 'natural' social order (Bourdieu and Passeron, 1977; Swartz, 1997). Ultimately, these misunderstandings serve to legitimate social order by concealing the power relations they are based on (Bourdieu and Passeron, 1977; Swartz, 1997). From this perspective, the American notion of self-sufficiency and individualism permeates shared understandings of social achievement such that it is internalized not only by those with economic and political power (who use it justify their position in society and blame the marginalized for not working hard enough), but also by those individuals who find themselves struggling to make ends meet. Such internalization can contribute self-blame and feelings of low self-worth. Drawing on these theoretical frameworks, we sought to explore the role social capital plays in shaping older women's experiences of food insecurity in three different settings in the U.S.

2. Methods

2.1. Research design and setting

We conducted a qualitative sub-study within the Women's Interagency HIV Study (WIHS). WIHS is a multicenter prospective cohort study of women living with HIV and demographically similar controls in nine sites across the U.S. (Adimora et al., 2018). The aim of the qualitative study was to explore the neighborhood-level factors that contribute to food insecurity among older women enrolled in the San Francisco, California, Atlanta, Georgia, and Chapel Hill, North Carolina WIHS sites. Women in the San Francisco site lived either in the city itself, or in the surrounding urban centers of the Bay Area. Women enrolled in the Atlanta and Chapel Hill sites also included women from the surrounding

rural areas. To account for the geographic differences within each site, we will refer to the sites as Northern California, Georgia and North Carolina for the remainder of the paper. The three sites were chosen due to their geographic diversity and differences in social welfare provision. All three sites have high poverty rates, however California has a historically generous public safety net, while Georgia has one of the lowest proportions of the population accessing welfare benefits in the nation. Social provision indicators from North Carolina fall between California and Georgia.

2.2. Sampling and recruitment

We recruited women enrolled in the Northern California, Georgia and North Carolina WIHS sites who met our inclusion criteria of being food insecure, as defined by the Household Food Security Survey Module (HFSSM) (i.e. having marginal, low or very low food security) and being 50 years of age or older. These eligibility criteria were chosen to allow us to explore our research question related to older women's experiences of food insecurity. Purposive sampling was also used to ensure participants lived in a range of different neighborhoods and that approximately two-thirds were living with HIV. This approach allowed us to explore women's perceptions of the neighborhood-level drivers of food insecurity across different settings, and to understand how the forms of social capital available to address food insecurity may differ by HIV status. Analysis of the WIHS database facilitated the identification of eligible participants and purposive sampling. We recruited women at the three sites from November 2017 through July 2018, with the goal of recruiting 10–12 women from each site.

2.3. Data collection

The semi-structured interview guide was developed by a team of four researchers including AML, HJW, and SDW, and consisted of broad, open-ended questions meant to elicit women's experiences with food insecurity and their perceptions of neighborhood-level factors that influence their ability to access food and manage their health. Questions in the guide were informed by prior research as well as social and behavioral theory including the construct of social capital. The guide was piloted in two pilot interviews and then refined based on the feedback.

Semi-structured in-depth interviews were conducted with 38 participants from November 2017 through July 2018. The interviews in Northern California and Georgia were conducted by a PhD-level social-behavioral scientist (AML) or a Master's-level graduate student (JS). A female researcher with extensive qualitative experience conducted the interviews in North Carolina. All interviews were conducted in English in a private room in the local WIHS office. Interviews lasted between 60 and 120 minutes, were audio recorded with permission from participants, and transcribed verbatim. All participants were assigned unique identification numbers and pseudonyms to protect their confidentiality and were compensated $55 at the end of the interview for their time.

2.4. Ethics

This study received human subjects research approval from the Institutional Review Boards of the University of California San Francisco (UCSF) (site lead for the Northern California

WIHS) and the University of North Carolina at Chapel Hill (site lead for the North Carolina WIHS), and by the WIHS Executive Committee. Emory University (site lead for the Georgia WIHS) waived approval because the Georgia data was collected by UCSF researchers. All participants provided written informed consent before starting the interview.

2.5. Data analysis

All interview transcripts were entered into Dedoose (2016) software for coding. Qualitative analysis was conducted using an inductive-deductive approach (Pope et al., 2000). Analysis was facilitated by multiple readings of the transcripts and memo writing to highlight emergent themes. An initial coding schema based on *a priori* codes informed by key research questions and prior research on experiences with food insecurity in the U.S. was developed by a team of three researchers (AML, JS, and HJW). The coding schema was then iteratively revised by adding new codes that reflected additional themes that emerged from the data, in consultation with SDW. The researchers met regularly throughout this process to discuss emergent themes and codes until they reached consensus and developed the final codebook.

The team of three researchers began by double-coding transcripts, using memos to elaborate upon the codes and their application. Differences in coding were identified and discussed during regular team calls until consensus was reached. Approximately one quarter of transcripts were double-coded to reach consensus about the application of the codes, and the remainder were single-coded. Once all the transcripts were coded, data were organized into chart format, with a chart for each theme and summaries of different perspectives and experiences from several participants. This method allowed the data to be compared and contrasted across different themes and perspectives, providing insight into explanations for the findings (Pope et al., 2000).

To improve the likelihood that the data we collected and the interpretation of that data stayed true to participants' lived experiences, all interviewers and analysts took detailed notes throughout the research process to reflect on how their experiences, values, and identity may have influenced the data they received and their interpretation of that data (Sandelowski, 1986). Research team members met regularly throughout data collection and analysis to discuss the thoughts they expressed in their notes and strategized ways to take these into consideration in future interviews and the analysis.

3. Results

We interviewed 14 participants from the Northern California and Georgia sites, and ten participants from the North Carolina site, for a total of 38 participants. The age of participants ranged from 50 to 64, with a mean age of 56 years, and the majority of the sample identified as African American (n = 25). All participants reported some level of food insecurity, by design. The majority of participants reported very low food security (n = 19), 14 reported low food security and five reported marginal food security. Approximately two thirds of the sample (n = 26) were living with HIV.

Most participants described multiple overlapping chronic illnesses including HIV, diabetes mellitus, hypertension and arthritis, which many argued limited their ability to navigate the

food environment to access food. Additionally, the vast majority of participants reported relying on social safety net programs such as Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI) as their primary source of income, as well as the Supplemental Nutrition Assistance Program (SNAP) (i.e. Food Stamps) to access food. Nearly all participants described these services as insufficient to meet their daily needs, including limiting their ability to access the quantity and quality of food they required to lead a healthy life. Within the context of limited financial resources and multiple intersecting chronic illnesses, a dominant theme that emerged was the use of different forms of social capital to improve food access. As a sub-theme, findings revealed that the forms of social capital women drew upon varied based on their geographic location, with women in Georgia and North Carolina drawing primarily upon bonding social capital, and women from Northern California relying on bridging and linking social capital. Findings did not differ by HIV status.

3.1. Forms of capital in Georgia and North Carolina

3.1.1. Bonding social capital in Georgia and North Carolina—

Women from Georgia and North Carolina described having limited access to formal sources of food assistance such as food banks and food aid organizations. While some participants from these sites described having access to food pantries in local churches, they noted that only one or two churches in their communities provided food support once a month. Within this context, participants articulated that they primarily received informal food support from their family, friends and neighbors. For example, participants in these settings described how community members would offer them food in times of need or they would share meals with each other. One participant from North Carolina described how she experienced difficulty accessing the grocery store because she didn't own a car and was unable to use public transportation because she had cardiovascular disease and severe arthritis, which made it difficult to walk to and from the bus stop. She described how her neighbors were aware of her mobility issues, and would sometimes bring her food:

> Sometimes, they'll go out to the store, they know I don't have access, they'll knock and ask if I need anything. Or they might just bring me something … like my neighbor, I was really shocked … he said I went up to Food Lot and got a little chicken, and he bought me a pack of thighs … He said, I figure maybe you might want it. And he didn't want me to pay him for it. I was going to pay him for it … They have looked out for me. (Laurie, 54 years, African American, North Carolina)

Another participant from Georgia described how people in her neighborhood started cooking for each other and sharing food to make sure everyone had enough to eat:

> When I moved [to] that neighborhood - the guy across from us, he was in a wheelchair. And I would cook and take him plates over there. His kids from his house, they come and bring plates. And all of a sudden, the next-door neighbors start. We all just started doing that, know what I'm saying? 'Well, I'm cooking today.' We might just take it and put all our food together and go out there and grill. I might cook all of the vegetables; they might cook the meat, stuff like that. There

> was 6 of us that was right in there together in the apartment complex. We did after each other. (Cynthia, 59 years, African American, Georgia)

The majority of participants in Georgia and North Carolina described living far away from food outlets and having limited access to public transportation. In order to overcome this barrier, women noted how they often relied on their family, friends and neighbors who had cars to take them to where they could access food. For example, one woman from Georgia described how she relied on her friend to take her to the food bank at her local church:

> [To access the food at the churches] you got to have a car. That's the reason Mr. [X] - he go get food, too, so I go when he goes. Because if he go to the food place, he'll call me. I might not be going that day or know nothing about it. He'll call me. He said, sister, this place is giving out food. You want to go? I would be like, yeah, come on … (Helen, 61 years, African American, Georgia)

Another woman from North Carolina noted that her neighbors offer to take each other to the grocery store:

> [My neighbors will] help you if you need to go to the grocery store. They help you if you run out of food … We will take each other to the grocery store. (Brianna, 61 years, African American, North Carolina)

3.1.2. Bridging and linking social capital in Georgia and North Carolina—

While the primary form of food support described by women in Georgia and North Carolina was informal support from their community, a few women also described receiving food support from individuals outside of their social group, as well as representatives from institutions such as social workers and health care providers. However, this was not a dominant theme. For example, one woman from Atlanta described how she belonged to an alumni organization affiliated with her University and was able to rely on women in that organization, who she described as being from a different social class as herself, to let her know when they have events with free food, or to bring her food when she was unable to access it herself.

> I [belong to] an organization here and one of the ladies will call me because we know each other real good and they'll say, "Well, you need to come down here because we've got this and this." Or they'll call me like when I broke my foot and everything. They called me and said, "Do you got enough food in the house?" I'd be like, "Well, not really." "We're going to bring you some." So, they would bring some food for me … (Ruth, 56 years, white, Georgia)

Another woman from Atlanta, who was living with HIV, described how her HIV care providers give her a voucher to access free food so she doesn't have to take her ART on an empty stomach.

> If I get to a point where [food insecurity] is affecting my health a lot, some doctors will … give you a voucher thing and all you do is in the same building. They've got an area where, you know, it's food. And they'll give you a bag of food. It could be fruit. It could be canned goods. All kinds, whatever because the doctor knows

> you've got to have you know, because you can't take all this medicine on an empty stomach … (Carol, 50 years, African American, Georgia).

3.1.3. Challenges—Another theme that emerged from the interviews with women from Georgia and North Carolina, was that having to rely primarily on informal food support from one's community made some women feel ashamed and embarrassed. While some women noted that they still accessed support from their friends and family, despite these feelings, others described how these feelings could prevent them from accessing support, causing them to go hungry. In the quote below, one woman articulates how having to rely on her roommate to access food has made her feel embarrassed, but that she continues to do so because she sees it as her only option to survive.

> You know because you're just trying to get the basics and survive, but it's just … food. You know … for the last six months, I've had to stretch so far. If I didn't have a roommate, I'd probably starve because there's no way I could survive. You know, and I feel bad when I ask my roommate, "Can you bring?" And they say, "Oh, that's no problem." But I was taught take care of myself. I don't like to ask for help … it's you feel kind of like … okay, me personally, I feel like a fool or I feel so embarrassed. I'd be like, "I don't want nobody to know what I'm going through until I get my next check … But the government put me in that position. So, I have no choice. (Ruth, 56 years, White, Georgia)

Other women described how feelings of shame from being in a situation where they had to ask for help to access food prevented them from accessing support. Some women described how not asking for help in times of need could lead to serious medical complications. For example, one participant who noted that she sometimes received food support from her son and neighbors described how she refused ask for help in accessing food because she didn't want people to think less of her. Instead, she would just wait for her son or neighbors to offer her food on their own. This approach meant that she would sometimes have to go days without food.

> I hold onto my pride no matter what because I don't want nobody saying, "Girl, you know we had to help her the other day. She didn't have no food." You can't ever tell me that because I'm not going to let you know I'm hungry. And I'm not going to let you know … So, you can't ever rub it in my face, call me stupid or a idiot or none of them things … [If no one offers me food] I wait. I just don't get none. I be hungry that week. (Helen, 61 years, African American, Georgia)

Later in her interview, this participant described how her health suffered as a result of this approach. She disclosed that she was living with HIV and type II diabetes, and had been hospitalized because of complications from not eating a balanced diet in the context of these diseases.

3.2. Forms of capital in Northern California

In contrast to the participants from North Carolina and Georgia, women in Northern California described having access to a number of different formal food aid services. These took the form of food pantries and churches, but also non-profit organizations dedicated to

providing food support. However, in this context, women overwhelmingly described limited connection to their community including distrust and avoidance.

3.2.1. Bonding social capital in Northern California—Women in Northern California described distrusting their neighbors due to experiences with community members sharing private information about them, stealing from them, speaking poorly of them or causing "drama" within the community. Because of this distrust, many women said that they preferred to lead more private lives and avoided forming relationships with their neighbors. Participants explained how distrust in their neighbors contributed to lack of mutual aid and support in their community. This is illustrated by the following quote:

> You know how it is, the neighbors … talking trash about somebody, or not saying nice things about somebody. Anyway, that's how it ended up … And so, some people are kind of like backed off, and don't want to associate with other people … That's why I said I trust some of them. Some of them I don't … And that's how it is at this point … Nobody's like banging on your door … Asking for stuff. Because I did - I had an apartment like that [before]. Coming at your door. Knock, knock, knock. Do you have some - you know? Oil, or do you have some flour? (Linda, 53 years old, Other race/ethnicity, Northern California)

When it came to food, the lack of mutual aid and support among community members in Northern California was described to be compounded by the fact that there were so many formal forms of food aid. As described in the following quote, some women did not feel obligated to help their neighbors who were in need of food support because there were so many formal resources available:

> I'm not going to lose no sleep over nobody in my hood. You know what I'm saying? No, for what? So, if you hungry … You better go to church, and go get your shit. If you want to go get it. I got what I want. And it's not for the community. It's for me. You know? I mean, hey … I'm not caring about no grown-ass people. (Maria, 51 years old, African American, Northern California)

3.2.2. Bridging social capital in Northern California—In the context of limited mutual aid and support within their immediate community, some women in Northern California accessed food support or information about food resources from members outside of their social group such as their co-workers or members of support groups they belonged to. This was described by one woman in Northern California who worked part time at a small company and would often rely on the food her co-workers, who she described as being from a different social class as herself, brought in for lunch:

> Sometimes I'm feeling a little stretched by the end of the month, but when I go to work some of the girls will have - if I don't have lunch they'll feed me, which is nice. We have a little kitchen at our job and sometimes …. they bring in, like they'll make soup, and my other friend, she is catering now so she'll bring in leftovers from her catering and feed everybody. (Elizabeth, 58 years, white, Northern California).

Some participants also described how they benefited from food donations from individuals from other social groups. For example, one woman who lived in low-income senior housing described how a farmer from a nearby town would donate food to the housing facility:

> By being a senior center, we have people who donate. This one man brings greens, collard greens from his farm in Gilroy. And he'll bring cases of it up there … And we get so many things donated. (Margaret, 64 years, African American, Northern California).

3.2.3. Linking social capital in Northern California—In addition to the support from individuals outside of their immediate community, women in Northern California described accessing information about food resources from representatives of institutional support services such as doctors, social workers and case managers. Specifically, women described how social workers or case managers would guide them through the sometimes difficult and confusing process of accessing free resources such as food and housing. For example, one woman described turning to the social worker in her housing complex for information about food and other resources:

> I turn to Ms. [X] … she's my go-to person. She knows everything. She's chock full of information … I can ask her about anything, I'm serious. Anything … She hooked me up with a free food box monthly. They give you a food box with some starches in it, and then you get juice, and then fresh vegetables if they have any. Yeah. Ms. [X], she called me yesterday – to remind me the food box is Thursday. Make sure you have your reservations. Okay. Thank you Ms. [X]. So, that's my go-to person. (Margaret, 64 years, African American, Northern California)

Another woman who was living with HIV and had renal failure explained that if she ever ran out of food to take with her medications, she could call her case manager and she'd deliver food to her:

> I [usually] just eat a cracker or something [to take my pills]. Unless it's time for me to take a whole bunch of the pills. Then I will eat and then take the pills. If I run out of food to eat and can't take my medicine, I always call the case manager, she brings me some food immediately. (Dorothy, 58 years, African American, Northern California)

3.2.4. Challenges—Although women in Northern California described having access to several formal forms of food support such as food banks and soup kitchens, as well as case managers/social workers, they still experienced barriers in accessing the amount and quality of food they required. Participants described how relying on formal forms of food support left them vulnerable to fluctuations in available resources. Women noted that the growing demand for these services due to rising housing costs and income inequality in their communities strained institutional resources. For example, soup kitchens and food banks were described to have exceedingly long lines, which sometimes prevented women from accessing food. As one woman articulated in the following quote, food aid programs can run out of food because of the high demand, while some people can take extra food and waste food that could have been given to others.

> Now in my life, everything is a line … that doesn't make me angry. It's just wait in this line and them not telling you anything about what's going on, and then when you get up there, 'I'm sorry we don't have no more.' But you let everyone stand in line. If you knew that was the last person you were going to be serving, you should have counted back and stopped it. Don't let no one else get in that line; don't let no one else stand there, because it's frustrating and it causes for people to lash out at other people. And they hit their plate out of their hand - now you don't got none, either. You know, that's just mean. But that's just what happens … So I would get really upset about not being able to eat. And I'd be mad at people that I seen eating, and my stomach was grumbling. And I'm walking down the street, and they're just sitting there and they're just stuffing their face with this stuff, and laughing. And then I watch them walk to the garbage can and throw half of it away in the garbage! (Barbara, 52 years, white, Northern California)

As in the last quote, other women also described how the high demand for food resources could lead to conflict amongst the service users. One woman who lived in a low-income retirement community explained that they would receive food donations and described how conflict could arise when people took more than their share of food:

> So, say people donated some chicken and rice … you could bring your container, and then you had food for the day, for the night. Of course, like I said, it's first come, first served, and you've got some older ladies who I used to think they were being greedy, but then I realized they were taking these containers and freezing them … So that they had food through the rest of the week. And, "you're trying to eat it all, get out of the way." "Let me get some." And she's back at it. Move away. We kicking each other trying to get some chicken and rice. (Margaret, 64 years, African American, Northern California)

4. Discussion

In this study, we explored the different forms of social capital older women access to manage their experiences with food inescurity in three sites in the U.S. Findings suggest that the forms of social capital women access are structurally determined. Women in Georgia and North Carolina noted having access to few forms of institutional food support, and limited bridging and linking social capital. In this context, women relied primarily on bonding social capital to access food. In contrast, women from Northern California described having access to a number of institutional food support services, as well as bridging and linking social capital. In this context, women almost uniformly noted limited bonding social capital. Each form of social capital had limitations in its ability to provide reliable food support and all women in this study still struggled with food insecurity. We did not find differences in social capital by HIV status, which was perhaps surprising given the potential for HIV services to enhance linking social capital. This may be explained by our focus on social capital in relation to food insecurity specifically, as opposed to issues more directly addressed by HIV clinical care.

In line with our findings from Georgia and North Carolina, prior research has also found that individuals rely on reciprocal relationships within their community to address the barriers

they face in accessing food via traditional market systems (Morton, 2008). However, findings from this study suggest that bonding social capital is not always a reliable way to access food and also may come with important psychological costs including feelings of embarrasment and shame. These results support and build upon prior work on the downsides of bonding social capital. While Portes recognized that bonding social capital could place excessive demands on group members to support each other and result in financial and mental strain (Portes, 1998), our findings also suggest that having to rely on support from community members can also have negative psychological impacts of their own. This finding may reflect the strong emphasis on self-sufficiency and individualism in U.S. society, arising from the core tenant of the "American Dream" that economic mobility can be achieved through individual effort (Hochschild, 1995). From this perspective, poverty and food insecurity are viewed as "moral failings" because they imply a person has not worked hard enough to achieve strong financial footing (Williams, 2009). Drawing on Bourdieu's theory of symbolic violence, women's internalization of these beliefs via experiences of bonding social capital may contribute to feelings of shame and self-blame, and work to conceal (and therefore perpetuate) the structural inequities that drive women's food insecurity and poor health outcomes (Bourdieu and Passeron, 1977; Swartz, 1997). Further, feelings of shame and self-blame from this internalization process can have detrimental health consequences in their own right (Leddy et al., 2019), and may reproduce themselves (with even greater consequences for health) if women avoid accessing food support as a result.

In contrast to women in Georgia and North Carolina, participants from Northern California reported having access to several formal food support services. In this context, women reported relying more on bridging and linking social capital and noted an absence of bonding social capital. For example, many women described working with social workers and case managers to learn about food support services, with few noting that they relied on their neighbors or friends for food support. This finding may be reflective of a political climate that supports addressing basic needs such as food, as demonstrated in recent policies implemented by juristictions in Northern California. A recent report from the San Francisco Department of Public Health revealed that between 2013 and 2018, the city of San Francisco substantially increased the amount of funding for food aid programs, and expanded food aid services (San Francisco Department of Public Health, 2018). California also recently launched the statewide Medi-Cal Demonstration project, which provides $6 million to cover medically appropriate foods for individuals who are critically ill and experience food insecurity to prevent rehospitalization (California Department of Health Care Services, 2018).

Importantly, however, findings from our study suggest that dependence on these more formal forms of food support also comes with its own set of challenges. Participants in this study described how in the context of increasing housing prices and income inequality in the San Francisco Bay Area, food aid services were becoming overcrowded and had limited supplies, sometimes preventing participants from accessing food. Furthermore, in the context of overburdened food aid programs participants complained that people often did not take their fair share of food from food aid services and that this led to conflict among community members.

The finding that women still experience food insecurity when accessing different forms of social capital has two possible implications: one that arises directly from the social capital framework; and another that points to the limitations of using social capital as a lens for addressing food insecurity. For the first, our findings could suggest that all three forms of social capital are necessary to address food insecurity, as no study site was characterised by salient experiences of all three. In order to address gaps in the forms of social capital women have access to, interventions need to be tailored to each context. For example, interventions in North Carolina and Georgia could build linking and bridging social capital to augment the existing bonding social capital and improve access to more formal forms of food support. Interventions in Northern California could build bonding social capital to promote cooperation and mutual support among members of the community and facilitate access to food when the more formal forms of food support run out.

Recently, other researchers have also made calls for social capital interventions to explicitly address the specific contexts in which they are being implemented (Shiell et al., 2020). In a recent review, Shiell and colleagues highlight that although a large body of literature has documented the relationship between social capital and health, there is limited evidence of effective interventions that address this relationship (Shiell et al., 2020). One explanation the authors posit for this is that social capital interventions have largely failed to adequately account for the contexts in which they occur (Shiell et al., 2020). The authors astutely note that because social capital is grounded in social relationships, it cannot be understood and effecitvely intervened upon without considering the social, physical, economic and political environment in which is it is created and reproduced. Our finding that the forms of capital women access to navigate the food system are determined by the social and political context in which they live supports this argument. It is possible that interventions that seek to redistribute resources to address the specific forms of capital women require, may improve women's food situation. However, these interventions must be centered in the community and respond to the unique context in which they are implemented (Shiell et al., 2020).

The second implication of the findings, on the other hand, is that they reveal important limitations in each form of social capital in providing reliable food access. We believe this finding is significant and points to the potential limitation of interventions that focus solely on building social capital while ignoring more structural approaches. Indeed, the literature on social capital has been criticized for failing to recognize and address the power structures and policies that produce economic and health inequities (Muntaner, 2004; Navarro, 2002). It is important to acknowledge that the majority of the participants in this study were African American and all were low-income. There is a long history of structural racism in the U.S. which has resulted in a multitude of policies that have sought to deprive African Americans of equitable access to social, economic and health resources (Bailey et al., 2017; Feagin and Bennefield, 2014). For example, 'redlining' policies in the 1940s, whereby low-interest home loans were offered to white middle-class families, but denied to Black families, led to a mass emigration of white families from cities into suburban neighborhoods (Rothstein, 2017). Supermarkets and many other businesses followed suit, leaving African Americans with limited access to economic opportunities and food resources-creating what we know today as 'food deserts' (ACLU, 2012). Given this context and our findings that the forms of capital are structurally determined and are not always reliable sources of food support, it is

likley that more structural approaches are necessary to adequately address food inecurity and its health impacts. This could include policies that increase benefits and expand eligibility to the Supplemental Nutrition Assistance Program (SNAP) (formerly known as food stamps) (Keith-Jennings et al., 2019), and provide more easily accessible, affordable and healthy food options to people across America. Policies that increase household budgets such as the Earned Income Tax Credit and cash transfers have also been shown to address food insecurity (Simon, 2018; Tiwari et al., 2016). Finally, policies that expand access to affordable healthcare such as Universal Healthcare may also address the negative health consequences of food insecurity and the vicious cycle that perpetuates food insecurity among chronically ill older individuals who are unable to work a steady job (Moreno-Serra and Smith, 2012; Seligman and Berkowitz, 2019). Such efforts might be even more necessary now that we are experiencing intersecting public health and economic crises and increased demand for food support due to the COVID-19 pandemic.

4.1. Strengths and limitations

This study has strengths and limitations. Because our study was nested within the WIHS, our findings reflect the perspectives of women living with or at risk of HIV. It is possible that women who experience food insecurity but are not living with or at risk of HIV may access different forms of social capital to navigate the food environment. Future research should explore this further. Despite this limitation, a strength of this study was the inclusion of older women, as they are at increased risk for experiencing food insecurity (Gundersen and Ziliak, 2020; Ziliak and Gundersen, 2020), but few studies have explored their experiences navigating the food environment, and the role social capital plays in this. Another strength was the fact that women in this study were recruited from three distinct geographic areas, which provided important insights into how the lived experience of food insecurity, and the forms of capital women draw upon to cope with these experiences, can differ by region.

5. Conclusions

This study explored the forms of social capital older women experiencing food insecurity in three distinct settings drew upon to manage their food situation. Findings revealed that the forms of social capital women had access to were structurally determined and had limited reliability in ensuring women’s food access. While social capital may be a useful analytic framework in this area insofar as it can help to shed light on the differential social structures driving food insecurity, ultimately we posit that in order to adequately address food insecurity, more structural interventions, beyond enhancing social capital, may be warranted.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements

We would like to thank the participants of this study for sharing their experiences and perspectives with us. This work was supported by a WIHS sub-study grant from the National Institute of Allergy and Infectious Diseases [K24AI134326 to S.D.W.]. This research was also supported by grant T32MH19105 from the National Institutes of

Mental Health of the U.S. Public Helath Service. This work was also supported by (Principle investigator): Atlanta WIHS (Ighovwerha Ofotokun and Gina Wingood), U01-AI-103408; UNC WIHS (Adaora Adimora), U01-AI-103390; Connie Wofsy Women's HIV Study, Northern California (Ruth Greenblatt, Bradley Aouizerat, and Phyllis Tien), U01-AI-034989; The contents of this publication are solely the responsibility of the authors and do not represent the official views of the National Institutes of Health.

References

ACLU, 2012 Unshared Bounty: How Structural Racism Contributes to the Creation and Persistence of Food Deserts.

Adimora AA, Ramirez C, Benning L, Greenblatt RM, Kempf MC, Tien PC, et al., 2018 Cohort profile: the women's interagency HIV study (WIHS). Int. J. Epidemiol 47, 393–394i. [PubMed: 29688497]

American Dietetic Association, 2010 Position of the American dietetic association: food insecurity in the United States. J. Am. Diet Assoc 110, 1368–1377. [PubMed: 20821887]

Bailey ZD, Krieger N, Agenor M, Graves J, Linos N, Bassett MT, 2017 Structural racism and health inequities in the USA: evidence and interventions. Lancet 389, 1453–1463. [PubMed: 28402827]

Bartali B, Frongillo EA, Bandinelli S, Lauretani F, Semba RD, Fried LP, et al., 2006 Low nutrient intake is an essential component of frailty in older persons. J Gerontol A Biol Sci Med Sci 61, 589–593. [PubMed: 16799141]

Bourdieu P, 1986 The forms of capital In: Richardson J (Ed.), Handbook of Theory and Research for the Sociology of Education. Greenwood Press, Westport, CT, pp. 46–58.

Bourdieu P, Passeron J, 1977 Book I: foundations of a theory of symbolic violence Reproduction in Education, Society and Culture. Sage, London.

California Department of Health Care Services, 2018 Medically Tailored Meals Pilot Program.

Coleman-Jensen A, Nord M, 2013 Food Insecurity Among Households with Working-Age Adults with Disabilities, ERR-144. U.S. Department of Agriculture, Economic Research Service, Washington, D.C.

Coleman-Jensen A, Rabbitt MP, Gregory CA, Singh A, 2019 Household Food Insecurity in the United States in 2018. ERR-270.

Dean WR, Sharkey JR, 2011 Food insecurity, social capital and perceived personal disparity in a predominantly rural region of Texas: an individual-level analysis. Soc. Sci. Med 72, 1454–1462. [PubMed: 21497429]

Dedoose, 2016 Dedoose. SocioCultural Research Consultants, LLC, Los Angeles, CA.

Denney JT, Kimbro RT, Heck K, Cubbin C, 2017 Social cohesion and food insecurity: insights from the geographic research on wellbeing (GROW) study. Matern. Child Health J 21, 343–350. [PubMed: 27439421]

Drewnowski A, Darmon N, 2005 The economics of obesity: dietary energy density and energy cost. Am. J. Clin. Nutr 82, 265S–273S. [PubMed: 16002835]

Feagin J, Bennefield Z, 2014 Systemic racism and U.S. health care. Soc. Sci. Med 103, 7–14. [PubMed: 24507906]

Gundersen C, Ziliak JP, 2020 Hunger Among Adults Age 50–59 in 2018: an Annual Report.

Hawe P, Shiell A, 2000 Social capital and health promotion: a review. Soc. Sci. Med 51, 871–885. [PubMed: 10972431]

Hochschild JL, 1995 Facing up to the American Dream: Race, Class and the Soul of the Nation. Princeton University Press, Princeton, NJ.

Jih J, Stijacic-Cenzer I, Seligman HK, Boscardin WJ, Nguyen TT, Ritchie CS, 2018 Chronic disease burden predicts food insecurity among older adults. Publ. Health Nutr 21, 1737–1742.

Kawachi I, 2006 Commentary: social capital and health: making the connections one step at a time. Int. J. Epidemiol 35, 989–993. [PubMed: 16870679]

Keith-Jennings B, Llobrera J, Dean S, 2019 Links of the supplemental nutrition assistance program with food insecurity, poverty, and health: evidence and potential. Am. J. Publ. Health 109, 1636–1640.

Leddy AM, Turan JM, Johnson MO, Neilands TB, Kempf MC, Konkle-Parker D, et al., 2019 Poverty Stigma Is Associated with Suboptimal HIV Care and Treatment Outcomes Among Women Living with HIV in the U.S. AIDS.

Leddy AM, Weiser SD, Palar K, Seligman H, 2020 A conceptual model for understanding the rapid COVID-19-related increase in food insecurity and its impact on health and healthcare. Am. J. Clin. Nutr

Lee JS, Frongillo EA Jr., 2001 Factors associated with food insecurity among U.S. elderly persons: importance of functional impairments. J. Gerontol. B Psychol. Sci. Soc. Sci 56, S94–S99. [PubMed: 11245369]

Leung CW, Epel ES, Willett WC, Rimm EB, Laraia BA, 2015 Household food insecurity is positively associated with depression among low-income supplemental nutrition assistance program participants and income-eligible nonparticipants. J. Nutr 145, 622–627. [PubMed: 25733480]

Martin KS, Rogers BL, Cook JT, Joseph HM, 2004 Social capital is associated with decreased risk of hunger. Soc. Sci. Med 58, 2645–2654. [PubMed: 15081212]

Moore S, Kawachi I, 2017 Twenty years of social capital and health research: a glossary. J. Epidemiol. Community Health 71, 513–517. [PubMed: 28087811]

Moreno-Serra R, Smith PC, 2012 Does progress towards universal health coverage improve population health? Lancet 380, 917–923. [PubMed: 22959388]

Morton LW, Bitto EA, Oakland MJ, Sand M, 2008 Accessing food resources: rural and urban patterns of giving and getting food. Agric. Hum. Val 25, 107–119.

Muntaner C, 2004 Commentary: social capital, social class, and the slow progress of psychosocial epidemiology. Int. J. Epidemiol 33, 674–680 discussion 700–674. [PubMed: 15282225]

National Research Council, 2006 Food Insecurity and Hunger in the United States: an Assessment of the Measure Panel to review the U.S. Department of Agriculture's measurement of food insecurity and hunger, Washington, D.C.

Navarro V, 2002 A critique of social capital. Int. J. Health Serv 32, 423–432. [PubMed: 12211285]

Pope C, Ziebland S, Mays N, 2000 Qualitative research in health care: analysis of qualitative data. BMJ 320, 114–116. [PubMed: 10625273]

Portes A, 1998 Social capital: its origins and application in modern sociology. Annu. Rev. Sociol 24, 1–24.

Reutter LI, Stewart MJ, Veenstra G, Love R, Raphael D, Makwarimba E, 2009 Who do they think we are, anyway?": perceptions of and responses to poverty stigma. Qual. Health Res 19, 297–311. [PubMed: 19224874]

Rothstein R, 2017 The Color of Law: A Forgotten History of How Our Government Segregated America. Liveright Publishing Corporation, New York, NY.

San Francisco Department of Public Health, 2018 Assessment of Food Security (San Francisco, CA).

Sandelowski M, 1986 The problem of rigor in qualitative research. ANS. Adv. Nurs. Sci 8, 27–37. [PubMed: 3083765]

Seligman HK, Berkowitz SA, 2019 Aligning programs and policies to support food security and public health goals in the United States. Annu. Rev. Publ. Health 40, 319–337.

Seligman HK, Bindman AB, Vittinghoff E, Kanaya AM, Kushel MB, 2007 Food insecurity is associated with diabetes mellitus: results from the national health examination and nutrition examination Survey (NHANES) 1999–2002. J. Gen. Intern. Med 22, 1018–1023. [PubMed: 17436030]

Seligman HK, Laraia BA, Kushel MB, 2010 Food insecurity is associated with chronic disease among low-income NHANES participants. J. Nutr 140, 304–310. [PubMed: 20032485]

Shiell A, Hawe P, Kavanagh S, 2020 Evidence suggests a need to rethink social capital and social capital interventions. Soc. Sci. Med 257, 111930.

Simon DMM, Goodell S, 2018 The Earned Income Tax Credit, Poverty and Health Health Affairs.

Swartz D, 1997 Culture and Power: the Sociology of Pierre Bourdieu. The University of Chicago Press, Chicago, IL.

Szreter S, Woolcock M, 2004 Health by association? Social capital, social theory, and the political economy of public health. Int. J. Epidemiol 33, 650–667. [PubMed: 15282219]

Tiwari S, Daidone S, Ruvalcaba MA, Prifti E, Handa S, Davis B, et al., 2016 Impact of cash transfer programs on food security and nutrition in sub-saharan africa: a cross-country analysis. Glob Food Sec 11, 72–83. [PubMed: 31396473]

United States Census Bureau, 2020 Household Pulse Survey Data Tables.

Villalonga-Olives E, Kawachi I, 2017 The dark side of social capital: a systematic review of the negative health effects of social capital. Soc. Sci. Med 194, 105–127. [PubMed: 29100136]

Walker JL, Holben DH, Kropf ML, Holcomb JP, Anderson H, 2007 Household food insecurity is inversely associated wtih social capital and health in females from special supplemental nutrition program for women, infants, and children households in Appalachian Ohio. J. Am. Diet Assoc 107, 1989–1993. [PubMed: 17964321]

Weiser SD, Young SL, Cohen CR, Kushel MB, Tsai AC, Tien PC, et al., 2011 Conceptual framework for understanding the bidirectional links between food insecurity and HIV/AIDS. Am. J. Clin. Nutr 94, 1729S–1739S. [PubMed: 22089434]

Whittle HJ, Palar K, Ranadive NA, Turan JM, Kushel M, Weiser SD, 2017 The land of the sick and the land of the healthy": disability, bureaucracy, and stigma among people living with poverty and chronic illness in the United States. Soc. Sci. Med 190, 181–189. [PubMed: 28865254]

Whittle HJ, Sheira LA, Frongillo EA, Palar K, Cohen J, Merenstein D, et al., 2019 Longitudinal associations between food insecurity and substance use in a cohort of women with or at risk for HIV in the United States. Addiction 114, 127–136. [PubMed: 30109752]

Williams WR, 2009 Struggling with poverty: implications for theory and policy of increasing research on social class-based stigma. Anal. Soc. Issues Public Policy 9, 37–56.

Ziliak JP, Gundersen C, 2020 The State of Senior Hunger in America 2018: an Annual Report.