J Immigrant Minority Health (2015) 17:255–262
DOI 10.1007/s10903-013-9873-x

ORIGINAL PAPER

"When you walk in the rain, you get wet": A Qualitative Study of Ghanaian Immigrants' Perspective on the Epidemiological Paradox

Sue A. Kaplan · Ramatu Ahmed · Adam Musah

Published online: 24 July 2013

Abstract This study sought to understand the perceptions of Ghanaian immigrants of the health status and health trajectory of their community. We conducted focus groups and interviews with 63 primarily Ghanaian immigrants living in New York City. Nearly all participants observed that Ghanaians are generally healthy when they arrive in the US, but that their health declines over time. Participants identified four causes of this perceived deterioration: changes in health behaviors, increased stress, environmental exposures, and barriers to health care. Participants see themselves as being at risk for many health problems resulting from changes in lifestyle that follow immigration. Although some vulnerabilities are unique to their experience as immigrants, many of the risk factors they described are the same as those that affect other residents in the communities in which they live.

Keywords Epidemiological paradox · Immigrant paradox · African immigrant health · Health disparities · Immigrant health

Introduction

A growing body of literature has sought to understand why certain immigrants groups have substantially better health outcomes than comparable native-born populations [1, 2] and to track the relationship between these outcomes and acculturation or duration of residence [3] and generational status [4]. Many studies have mapped how this advantage—known as the "epidemiological" or "immigrant paradox"—decreases and even reverses for immigrants who have lived in the US for extended periods of time [5–11].

African immigrants are one of the fastest growing groups of immigrants to the US [12]. In New York City, the number of Africans increased by more that 250 % between 1990 and 2005–2007 [13]. But the health status, assets, needs, and concerns of this diverse population remain largely unexamined. The research that does exist suggests that African immigrants tend to be healthier than African Americans, but that the longer they reside in the US and the more acculturated they become, the more they take on the risk profile of the communities around them [14–18]. Through key informant interviews and focus groups, we sought to understand how West African immigrants perceive the epidemiological paradox and to learn about their sense of the dynamics that may cause health to change over time.

Methods

Setting

Our work has focused in the South Bronx, a neighborhood that has become a center for West African immigration in New York City, and has been undertaken as part of a community health partnership, Bronx Health REACH, which was formed in 1999 to address racial and ethnic disparities in health that community. Our primary partners in this effort—the Highbridge Community Life Center and Bronx Lebanon Hospital Center—have worked with West

S. A. Kaplan (✉)
Department of Population Health, New York University School of Medicine, Translational Science Building, 227 East 30th Street, 6th Floor, New York, NY 10016, USA
e-mail: sue.kaplan@nyu.edu

R. Ahmed
African Life Center, New York, NY, USA

A. Musah
New York City Department of Education, New York, NY, USA

African immigrants on issues concerning adult education, foster care prevention, and access to schools, housing, and health care. This work also grows out of a collaboration between New York University and its affiliated public hospital, Bellevue Hospital Center, and the University of Ghana and its affiliated public hospital, the Korle Bu Teaching Hospital, which have joined together to develop a multi-disciplinary collaboration to address health and health care in Ghana and the United States. This project is one of a series of complementary efforts in New York and Accra focused on the prevention and management of non-communicable diseases.

Design

As with all of our work in these partnerships, this project has taken a community-based participatory approach [19–21] in which our partners, as well as all co-authors, helped set the research agenda, review the methodology and protocols, gather data, interpret findings, and provide analysis and feedback.

This was a qualitative study conducted among 63 West African immigrants ≥18 years living in New York City. West Africa is a very diverse region, in terms of language, ethnicity, religion, levels of political stability and economic development. Thus, the challenges of acculturation vary widely, as do reasons for migration [22]. Because this study could not include numbers that would reflect this diversity, we chose to focus primarily on immigrants from Ghana—the largest group of African immigrants in the Bronx [23].

Qualitative methods were selected because this was an exploratory study in which we sought to understand multiple perspectives that might explain a variety of health outcomes. In addition, we anticipated that the discussion would touch on potentially sensitive topics, including attitudes towards childrearing, family relations, and acculturation. We therefore held the interviews and focus groups in community settings where participants already knew each other (and in some cases, knew the facilitators) so that they might feel more open in discussing these issues.

Participants

Ten people participated in key informant interviews, in many cases providing introductions to community groups and associations, which subsequently hosted focus groups. The interviews, which were led by the first author, each lasted approximately 1.2 h. With the exception of one telephone interview, all were conducted in person at a location selected by the key informant. Honoraria of $20 was offered to, but not accepted by, all key informants. The key informants were selected because of their intimate knowledge of the community. Three of the key informants were leaders in the National Council of Ghanaian Associations, one was a lay leader in a mosque, one was a lay leader and health liaison in a church, and the remaining five worked in the not-for-profit or public sectors providing outreach or advocacy for the West African community. All were asked to reflect on community need from a leadership or professional perspective. Although some of the focus group participants were also professionals (including one group of health professionals), those conversations were directed primarily at the personal experiences of the participants.

The focus group participants were identified through a network of community-based organizations. In each case, we met with a community leader or attended an introductory meeting to describe the project and then followed up with individuals who expressed interest in participating, sometimes convening groups and sometimes attending standing meetings.

Selected characteristics of participants are provided in Table 1.

Data Collection

Six focus groups were conducted at community locations in the southwest Bronx, NY, including community centers, churches, a local restaurant following services at a nearby mosque, and the conference room in a local hospital. These organizations, which were suggested by key informants or were known to one of the co-authors, were informed of the purpose of the study, invited to participate, and asked to host a focus group often to follow a standing meeting or religious service. Sampling was done purposefully to identify first or second generation Ghanaian immigrants whose rich personal experience would be typical of others from that group. Eligibility criteria for participation included being a first or second generation immigrant from Ghana, although several other West African immigrants did participate, and being at least 18 years of age.

Before each focus group, participants were asked to complete a brief demographic survey. Focus groups lasted approximately 1.25 h. Honoraria of $20 were paid to all participants except for one group for which food was provided instead at the request of the participants. The focus groups were conducted by the first author, assisted by either a co-author or, in one church, by a member of the congregation who was the health liaison for the Faith Based Initiative of Bronx Health REACH.

We began the focus group and interviews by describing the epidemiological paradox in lay terms, explaining the lack of research concerning African immigrants. Key informants were asked primarily about the health and health trajectory of the community; focus group participants were asked about their own health and the health of family and friends from West Africa. Informed consent was obtained from all participants. The study protocols

Table 1 Selected characteristics of focus group participants (N = 53)

Characteristics	No. (%) or mean (range)
Gender	
Male	37 (70)
Female	16 (30)
Age	45 (28–79)
Duration of residency in US	
<5	4 (7)
5–10	13 (25)
11–20	12 (22)
>20	11 (21)
Blank	13 (25)
Insurance coverage	
Yes	41 (77)
No	12 (22)
Country of origin	
Ghana	45 (85)[a]
The Gambia	3 (6)
Nigeria	3 (6)[b]
Cameroon	1 (2)
Religious affiliation	
Muslim	27 (51)
Christian	26 (49)
Usual source of care	
Private doctor	23 (43)
Herbalist/healer	0
Clinic	8 (15)
Emergency room	1 (2)
Hospital	17 (32)
Do not seek care	3 (6)
Blank	1 (2)
Have a regular doctor	
Yes	41 (77)
No	12 (23)
Cost as barrier to access	
Yes	11 (21)
No	42 (79)

[a] Of this group, 3 were born in the US, 2 of Ghanaian parents and one whose mother was from Ghana and father was from Togo

[b] One participant was born in Sweden of Nigerian parents

were approved by the New York University institutional review board.

Data Analysis

Focus groups and interviews were digitally recorded and transcribed verbatim by a professional transcription service. Each transcript was first reviewed for accuracy and then was coded by the first author using ATLAS.ti Scientific Software Development. In the first phase of coding, codes were drawn from the interview guide and research questions. In the second phase, two members of the research team created and applied inductive codes to identify additional themes and patterns [24]. The authors, two of whom are community partners (RA, AM), met numerous times over the course of the data collection and analysis to discuss emerging themes. Ultimately, the data were summarized in reports generated for each domain and representative quotes were selected to illustrate key findings.

Presentations of preliminary findings were made to three key informants individually and the findings and their implications were discussed at length. In addition, we presented interim results at two community forums during which feedback and reactions were sought from those present. Findings were also presented and feedback provided at a Community Enrichment Day, which was sponsored by the African Muslim Council and attended by nearly 200 community members, including participants from two of the focus groups.

Results

Nearly all of the focus group participants observed that Ghanaians are generally healthy when they arrive in the United States, but that their health declines over time. One woman eloquently stated the view expressed by many:

> When you walk in the rain, you get wet. When we started living our lives like the Americans do, we start developing the stress and the illnesses too. We enjoy the good and the bad.

Participants identified four broad causes of this perceived deterioration: changes in health behaviors, increased stress, environmental exposures, and barriers to health care services. Each of these is discussed below, followed by recommendations that were made to address some of these concerns.

Health Behaviors

Diet

In all of the focus groups, participants expressed a strong attachment to their native cuisines [25, 26]. Yet, although people reported that African ingredients are quite accessible in New York City, many emphasized the challenges to maintaining this diet and questioned whether their traditional way of eating was viable or even healthy in the context of their current lives. Several people noted that the preparation of traditional food is time consuming and that the pressures of work and childrearing mean that it is often

easier to "buy … some junk food to keep on moving." Others reported that they continue to prepare traditional dishes but noted that because of the pressures of work and family life, they eat dinner very late and that there is no time to let this "heavy" food "work out from your system before you go to bed." By contrast, "back home, even if you eat heavy [traditional] food, you go outside and you walk … and by the time you get there … your digestive system has taken care of it and the sun helps too." People therefore wondered if traditional food is appropriate for their current, more sedentary and indoors lifestyle.

Many participants vividly recalled their initial astonishment at the sheer quantity of food available in the US. As one man observed, "Portions are astronomic… [E]verything here is big." Several described a common pattern of "mak[ing] up for the deficit back home." Many reported that even after they reached an equilibrium, their diets remained changed.

Of particular note, discussed at length in every group, was the availability of fast food and soda. As one man observed, "back home eating fast food is for the affluent. But here it is cheaper than other foods." Others noted that "at home, [soda] was a very special treat" consumed only at "Christmas or on your birthday." Every participant seemed to be aware that drinking soda is not healthy, perhaps because of a strong public health campaign in New York City. But many people noted that the temptation was too great: "No Ghanaian here drinks water," one woman stated definitively.

These concerns were heightened when people talked about the eating habits of children. Some participants noted that their children liked traditional African food and others reported that their children rejected it, but all agreed that children feel the social pressures and influences of their peers and are surrounded by temptations: "There are small shops everywhere and getting junk food is easy. By the time they're coming back [home], they eat too much junk, and that's no good."

Physical Activity

One key informant noted that "in Africa, exercise is not part of the lifestyle. Children play soccer, but once you reach a certain age, when you get married, it is not appropriate for men to wear shorts in public." So the fact that West African immigrants here "do not get exercise, is not a *change* in behavior," he explained. "It is *consistent*" with their behavior and practices back home. But as he noted and many focus group participants confirmed, "back home, we get 'involuntary exercise.'" Everyday activities, from "mashing the fufu" (a staple of Ghanaian cuisine that is made of pounded cassava), to visiting friends, to shopping and cleaning, entail physical activity. Here, by contrast, the environment–cold weather, accessible public transportation, long work hours, and safety concerns—makes it difficult to be physically active. Several men observed that the sedentary job of driving a taxicab, which was described as "the normal work of our community," was particularly harmful: "I sit in a cab for eight, ten, twelve hours and then I'm coming back home so tired, just eat and sleep."

Sleep

Many participants noted that "Here, no one gets enough sleep." By contrast, in Ghana, the pace of life is "more relaxed" and work hours are often shorter so the day is not so truncated. In addition, naps are a "tradition" in many West African countries, scheduled into the school day and workday. As one woman reported, "They don't joke with their naps!"

Tobacco Use

Participants perceived very different attitudes towards smoking in the US and in Ghana. Here, smoking is seen as "a lifestyle" and "attractive." Whereas, "back home, smoking is something that bad people do." The stigma is particularly strong for women. Several people explained that a woman who smokes is assumed to be "promiscuous" or even "a prostitute." There was no clear sense from the key informants or among the focus group participants of whether rates of smoking increase or decline following immigration, in part because both in Ghana and here, people "hide it because people look at you differently when they see you smoking."

Stress and Social Support

In every key informant interview and every focus group, people attributed a wide array of health problems, including hypertension, high cholesterol, arthritis, diabetes, and impotence, to increased stress resulting from immigration. For some, stress was seen the single biggest cause of health problems: "the number one contributing factor." Many sources of stress were discussed: economic pressures, changes in social structures, and diminished social status.

Economic Pressures

With fewer social supports and a less forgiving environment, participants described feeling vulnerable and worried about their financial stability. For those who are undocumented, the pressures are particularly severe and the need to find employment trumped concerns about health. As one man explained, "The big issue for many is getting

integrated into economy—even getting low level jobs. Health is secondary."

The stress of "how to make a better life here is compounded by the stress of how to make a better life for relatives back home." Many explained that they and other West African immigrants "come here on borrowed money." Several people noted that families "invest" in the relative who immigrates, "sometimes even sell[ing] the family's means of living … in order for the person to come over here." So the family back home "expect[s] something back in return."

Universally people felt that friends and family did not understand their financial struggles, and participants worried that they were seen as being selfish if they could not meet expectations. This was particularly painful because people did not minimize the needs of family and friends back home, especially the need for expensive medical care.

Changes in Social Structures and Family Life

Many of the participants, in part because of our recruitment methodology, belonged to formal organizations (churches, mosques, associations); others described themselves as being part of important informal social networks. One young man summed up the consensus in his group: "Our community supports us … It is the sense of community that keeps you sane. We can always talk to a friend … I can go to the barber shop one block from my home and see my friends and get the pressure out." Yet many also felt a loss of the more substantial social supports that they had at home. Some with split families missed having relatives nearby to help particularly with childcare. Several participants saw a connection between their more isolated lives here and their decreased physical activity. Back home, they explained, socializing often takes place outdoors. By contrast, in New York, "you could wake up one morning, and would not step outside of your building or room the whole day, or a whole weekend."

In several focus groups and interviews, people discussed the toll on health that results from the change in gender roles following immigration. Several people reported that there is a strong cultural norm that marital conflicts should be kept private. Some women noted that the resulting sense of isolation, together with the stress from their "complex" roles, leads to a sense of "exhaustion," and no time for health.

The health and safety of children was also of great concern. Many spoke with nostalgia about how they were raised back home and few were convinced that childrearing practices here are superior. Many expressed concern that the prohibition against corporal punishment left them with few tools to protect their children from dangerous peer influences: drugs, smoking, and gang activity.

Diminished Social Status

A final source of stress discussed in every focus group was sense of diminished social status. Several people noted that West Africans immigrants "work at much lower levels than they would back home, for example, people with college or masters level degrees working in security." One young man elicited strong agreement when he talked about the stigma of being "seen as a foreigner." Another commented:

> We are at the bottom of the pecking order. Our skin color doesn't do much to do you justice…All the cards are really stacked really against you.

Many people described encounters in which they felt belittled or misunderstood because of their African origins ("How can a plane land in the jungle?" "Do you sleep in trees?"). Although some were amused by this ignorance, many also noted that it leads to harassment at work—several people expressed a fear of workplace violence—and to bullying of children at school and teasing by their teachers.

Environmental Exposures

A number of participants expressed concern that living conditions in New York City are unhealthy. Some worried about pollution, others worried about overcrowded and unsanitary apartment buildings, and others expressed concern about general exposure to toxic substances. For many, this concern centered on foods that are "filled with chemicals" or "artificial fertilizers," even contaminating foods that are part of a traditional diet, such as rice and fufu. Several people noted that fufu is sold in a powdered form here and many expressed concerned about serving something that seemed so highly processed to children.

Barriers to Care

A surprising large number of focus group participants reported having some form of health insurance (41 out of the 53 participants). But many reported that cost was a barrier for other West African immigrants and was a particularly strong deterrent to seeking primary and preventive care. One focus group participant noted, "Why pay to find out that nothing is wrong? And why pay to find out that I have a costly problem that I can't feel, like diabetes and high blood pressure?"

In addition to financial barriers, participants identified a number of cultural barriers to care. In several groups, participants noted that in Ghana, people do not go to the doctor "unless it knocks a person down" and immigrants carry that practice with them when they come to the US.

Others cited "communication issues," ranging from language barriers to issues of respect. In one focus group, a West African doctor advised, we "need to teach doctors to speak respectfully. You can't have a 20-something-year-old yelling at an elderly man about his diet or medicine." Others described the need for cultural awareness, which includes sensitivity to religious beliefs and prohibitions. Some reported that people hesitate to seek care since they are frequently tested for HIV; as Africans, they are presumed to be at risk. Finally, many noted that in Ghana, "real" medicine always involves an injection, so people do not trust that "they are getting true care here without an injection."

Recommendations

In each conversation we asked participants to recommend interventions to reduce the risk factors for poor health in their community. There was near unanimous consensus that education is critically important as a pathway to economic success, which was seen as a prerequisite to health. Many participants also stressed the need for community-based education about health care access. Although most focus group participants were quite knowledgeable about health behaviors, many did not know about health services that are available free-of-charge or with a sliding scale. In addition, many noted that more isolated groups, for example, those who do not speak English, are less knowledgeable about health behaviors and the risks of chronic disease and would benefit from basic health education [27]. A number of people suggested that such efforts could be best accomplished through churches and mosques, and that community elders could serve an important role by modeling health behaviors and the utilization of services.

Discussion

Summary

> So, it's a whole lot of factors that are coming to meet here and that…leaves that person exposed and vulnerable. [Statement of Ghanaian female focus group participant]

This group of predominantly Ghanaian immigrants to New York City see themselves as being at risk for many health problems resulting from significant changes in lifestyle that follow immigration. Participants identified four broad causes of this perceived vulnerability: (1) changes in health behaviors, including the quantity and quality of food consumed, diminished physical activity and inadequate sleep; (2) increased stress resulting from economic pressures, diminished social support and reduced social status; (3) environmental exposures, such air pollution and overcrowding; and (4) financial and cultural barriers to health care services.

Implications

Many of the risk factors identified by this group of West African immigrants are the same as those that affect other residents in the communities in which they live. Moreover, the barriers to care they described—cost, language access, distrust, competing priorities—are also familiar to residents of poor communities [28]. This does not bode well for the long-term health outcomes of this rapidly growing group of new immigrants. Indeed, the South Bronx, where most of our focus groups were held and where the majority of participants live, has among the worst health outcomes in New York, with high levels of obesity, diabetes, heart disease, and cancer [29].

Some of the stresses and vulnerabilities people described are unique to their experience as immigrants: disruptive changes in family structure and roles following immigration, the difficulties of being undocumented, heightened economic pressures from the need to send home remittances, the sense of diminished social status. (We did not collect data on pre- and post-immigration occupational status in our brief survey, but given the likely impact of diminished employment status on physical and mental health, we plan to include such a question in any future research.) At the same time, although many felt they had fewer social supports here than at home, they nevertheless felt supported by the wide array of community groups and networks to which they belonged and contrasted this with the more "individualist" nature of US society.

Although our inquiry explored a wide range of factors that might influence health outcomes, our findings may be of particular interest to health care providers. By understanding the experience of this diverse population, particularly post-immigration changes in health behaviors, social structures and status, and the financial and cultural barriers to care, health care providers can better build "culturally safe environments" [30] for care delivery that expand the notion of cultural sensitivity to recognize underlying and diverse causes of poor health and lack of access.

Finally, several of the issues and concerns discussed in the focus groups dovetail with initiatives in Ghana. Increasingly, health care providers and the Ministry of Health in Ghana are focusing on the risk factors for and management of chronic disease. Changes in lifestyle, particularly for wealthy urban populations, are leading to an increase in obesity, hypertension, and heart disease [31], creating enormous challenges for the health care system and health professionals.

Similarly, there is a growing interest in the problem of child abuse in Ghana, where the government recently

enacted laws to protect children, and programs are being developed to train providers on how to screen and treat children and families. Early on, we were warned by five of the key informants to proceed carefully with the topic of childrearing since participants might feel defensive about traditional practices of discipline. But in every group in which parents participated, the topic of childrearing proved to be of tremendous interest. Several partners at community-based organizations reported that West African parents have requested and now have begun training in parenting skills in an effort to understand and adapt to cultural norms and legal requirements in the US.

Growing out of these two areas of shared concern, we are working with colleagues in Ghana to enhance the training of health care providers in Accra concerning cardiovascular disease, and we have partnered with a new center on child abuse at the Korle Bu Teaching Hospital to enhance their educational efforts. Our hope is to strengthen our efforts in both cities so that what we learn can contribute to capacity building and program development in both New York and Accra.

Limitations

Interviews and focus groups are an effective way to explore attitudes about complex and culturally sensitive topics. In all of the focus groups, as well as with each interview, we found the participants to be engaged and willing to share ideas and to suggest explanations for behaviors and beliefs. As a result, we benefited from a rich set of in-depth, lively and often very personal discussions and exchanges.

These methodologies have certain inherent limitations, however, most importantly in that generalizability may be limited. For example, our method of recruiting participants through a network of community- and faith-based organizations most likely resulted in a sample that was more socially connected and more comfortable speaking English than other groups of immigrants from Ghana and other parts of West Africa. This is reflected in the high rates of health insurance coverage among the participants (77 %) and their relatively long duration of residence in the US. The health behaviors of our participants may therefore more closely resemble those of the communities in which they live than would be true for newer arrivals. By the same token, more recent immigrants who are less acculturated and less integrated into the economy might well experience greater stresses and barriers to care.

Further Research Questions

Several areas warrant additional exploration. The impact of stress on health and health behaviors was a recurring theme in our focus groups and interviews, as it has been in all of our community work in the South Bronx [32]. Understanding how to address this issue, particularly the recurring concern with bullying in school, is an important area for additional work. Finally, concern about impotence was discussed in our final focus group of predominantly young men. Some attributed this problem to stress and others to change in diet. Since this was only raised at the end of our work, we did not have a chance to explore this issue in depth. But, given the consensus in this group and the concern with which they spoke, it clearly warrants further investigation and may offer a way to engage a subset of the population who would otherwise not seek care.

Acknowledgments This publication was made possible by a grant from the Carnegie Corporation of New York, with additional support from Bronx Health REACH and the United Hospital Fund. Significant assistance was provided by the African Muslim Council, the African Services Committee, the National Council of Ghanaian Associations, the Highbridge Community Life Center, and Bronx-Lebanon Hospital Center. The statements made and views expressed are solely the responsibility of the authors.

References

1. Singh GK, Hiatt RA. Trends and disparities in socioeconomic and behavioural characteristics, life expectancy, and cause-specific mortality of native-born and foreign-born populations in the United States, 1979–2003. Int J Epidemiol. 2006;35(4):903–19.
2. Franzini L, Ribble JC, Keddie AM. Understanding the Hispanic paradox. Ethn Dis. 2001;11(3):496–518.
3. Sonis J. Association between duration of residence and access to ambulatory care among Caribbean immigrant adolescents. Am J Public Health. 1998;88(6):964–6.
4. O'Malley AS, Mandelblatt J, Gold K, Cagney KA, Kerner J. Continuity of care and the use of breast and cervical cancer screening services in a multiethnic community. Arch Intern Med. 1997;157:1462–70.
5. Gee EM, Kobayashi KM, Prus SG. Examining the healthy immigrant effect in mid- to later life: findings from the Canadian community health survey. Can J Aging. 2004;23(Suppl 1):S61–9.
6. Chavez N, Sha L, Persky V. Effects of length of stay on food group intake in Mexican American and Puerto Rican women. J Nutr Educ. 1994;26:79–86.
7. Guendelman S, Abrams B. Dietary intake among Mexican-American women: generational differences and a comparison with white non-Hispanic women. Am J Public Health. 1995;85(1):20–5.
8. Khan LK, Sobal J, Martorell R. Acculturation, socioeconomic status, and obesity in Mexican Americans, Cuban Americans, and Puerto Ricans. Int J Obes. 1997;21(2):91–6.
9. Sundquist J, Winkleby M. Country of birth, acculturation status and abdominal obesity in a national sample of Mexican-American women and men. Int J Epidemiol. 2000;29(3):470–7.
10. Diez Roux AV, Detrano R, Jackson S, et al. Acculturation and socioeconomic position as predictors of coronary calcification in a multiethnic sample. Circulation. 2005;112(11):1557–65.
11. McDonald JT, Kennedy S. Insights into the 'healthy immigrant effect': health status and health service use of immigrants to Canada. Soc Sci Med. 2004;59(8):1613–27.
12. Venters H, Gany F. African immigrant health. J Immigr Minor Health. 2009; http://www.springerlink.com/content/536212884g00h81w/.

13. Data on immigration from the NYC Department of City Planning (personal communication March 10, 2009).
14. Koya DL, Egede LE. Association between length of residence and cardiovascular disease risk factors among an ethnically diverse group of United States immigrants. J Gen Intern Med. 2007;22(6):841–6.
15. Bennett GG, Wolin KY, Okechukwu CA, et al. Nativity and cigarette smoking among lower income blacks: results from the healthy directions study. J Immigr Minor Health. 2008;10(4):305–11.
16. Bennett GG, Wolin KY, Askew S, Fletcher R, Emmons KM. Immigration and obesity among lower income blacks. Obesity. 2007;15(6):1391–4.
17. Harding S, Rosato M, Teyhan A. Studies in Europe: trends for coronary heart disease and stroke mortality among migrants in England and Wales, 1979–2003: slow declines notable for some group*s*. Heart. 2008;94:463–70.
18. Hamilton TG, Hummer RA. Immigration and the health of US black adults: does country of origin matter? Soc Sci Med. 2011;73:1551–60.
19. Kaplan SA, Ruddock C, Golub M, Davis J, Foley R, et al. Stirring up the mud: using a community-based participatory approach to address health disparities through a faith-based initiative. J Health Care Poor Underserved. 2009;20:1111–23.
20. Kaplan SA, Garrett KE. The use of logic models by community-based initiatives. Eval Program Plann. 2005;28:167–72.
21. Kaplan SA, Dillman KN, Calman NS, Billings J. Opening doors and building capacity: employing a community-based approach to surveying. J Urban Health. 2004;81:291–300.
22. Patil CL, Hadley C, Nahayo PD. Unpacking dietary acculturation among new Americans: results from formative research with African refugees. J Immigr Minor Health. 2009;11(5):342–58.
23. Data on immigration from the NYC Department of City Planning (personal communication March 10, 2009).
24. Patton MQ. Qualitative research and evaluation methods. 3rd ed. Thousand Oaks, CA: SAGE Publications; 2002.
25. Patil CL, Hadley C, Nahayo PD. Unpacking dietary acculturation among new Americans: results from formative research with African refugees. J Immigr Minor Health. 2009;11(5):342–58.
26. Holtzman JD. Food and memory. Annu Rev Anthropol. 2006; 35(1):361–78.
27. Simbiri KOA, Hausman A, Wadenya R, Lidicker J. Access impediments to health care and social services between Anglophone and Francophone African immigrants living in Philadelphia with respect to HIV/AIDS. J Immigr Minor Health. 2010;569–579.
28. Kaplan SA, Calman NS, Golub M, Davis JH, Billings J. Racial and ethnic disparities in health: a view from the South Bronx. J Health Care Poor Underserved. 2006;17:116–27.
29. Olson EC, Van Wye G, Kerker B, Thorpe L, Frieden TR. Take care Highbridge and Morrisania, Second Edition. NYC Community Health Profiles. 2006;6(42):1–16.
30. Ramsden I. Teaching cultural safety. NZ Nurs J Kai Tiaki. 1992;85(5):21–3.
31. Agyei-Mensah S, de Graft Aikins A. Epidemiological transition and the double burden of disease in Accra, Ghana. J Urban Health. 2010;87(5):879–96.
32. Kaplan SA, Madden VP, Mijanovich T, Purcaro E. The perception of stress and its impact on health in poor communities. J Community Health. 2013;38(1):142–9.