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**Factors Influencing Dietary Practices Among Liberian Refugees and Ghanaian Residents**

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A Thesis Presented to  
The Faculty of the Department of Social and Behavioral Sciences  
Yale School of Public Health  
In Candidacy for the Degree of Master of Public Health  
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## **Abstract**

Buduburam Refugee Settlement was established in Ghana in 1990 by the United Nations High Commission for Refugees (UNHCR) in response to Liberia's first civil war (1989-1997). A limited amount of research on intergenerational differences and acculturation with respect to diet in refugee populations has been published, despite refugees' susceptibility to food insecurity and diet-related health conditions. As the worldwide refugee population continues to grow, it becomes increasingly important to develop socio-cultural frameworks to address specific health and nutrition needs of refugees. Therefore, the purpose of this qualitative study was to understand among Liberian refugees in Buduburam Refugee Settlement: 1) dietary practices in Liberia prior to the migration to Ghana; 2) whether these practices changed since being at the camp, and if so, why; and 3) how the availability, accessibility, and cost of food sources, as well as dietary practices and cultural beliefs surrounding food, influence the way they eat.

In-depth interviews were collected as part of a larger cross-sectional study that used both qualitative and quantitative methods to examine: a) shifts in dietary practices among Liberians since living in a protracted situation in a refugee settlement camp and b) the influence of Liberians on Ghanaians living in and around that refugee settlement. Seven domains emerged, forming direct and indirect pathways influencing dietary patterns among Liberian refugees and Ghanaians: national identity (proxy for culture), food preparation, food availability, food access, social support, food beliefs, and nutrition knowledge. Our qualitative findings provide key insights into the major factors driving dietary practices among refugees and local communities in and around a former refugee settlement. Our results strongly suggest that nutrition education, food availability, and access issues need to be addressed with well thought out, culturally-sensitive programs targeting both the refugee as well as the host communities.

## **Acknowledgments**

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## **Introduction**

Buduburam Refugee Settlement was established in Ghana in 1990 by the United Nations High Commission for Refugees (UNHCR) in response to Liberia's first civil war (1989-1997). The war grew out of confrontations between the government and an opposition group, the National Patriotic Front of Liberia, led by the minister Charles Taylor. Liberia's first civil war resulted in nearly 150,000 deaths, mostly of civilians, and displaced approximately 850,000 people.<sup>1</sup> Most Liberian refugees seeking asylum in Ghana settled in Buduburam Refugee Settlement, the largest of two refugee camps established in Ghana.

Buduburam Refugee Settlement is located approximately 35 km west of Accra, Ghana's capital. The camp consists of 12 defined zones, 10 of which were in the original settlement, and two which were developed as the camp expanded into the adjacent Buduburam village. While the original 10 zones are home to predominately Liberian refugees, two zones (Zones 11 and 12) house both Liberians and Ghanaians. The original 140-acre parcel of land was meant to host 5,000 refugees, but by 2004, it had more than 50,000 residents and had expanded into nearby villages of Awutu, Feeteh, and Kasoah. The large population posed a burden to already scarce facilities. In 2004, about two-thirds of the population consisted of women and children, many of whom were vulnerable due to age or illness and unable to support themselves.<sup>2</sup>

Liberian refugees in Ghana represent a protracted refugee situation; in spite of hostile living conditions in Ghana and peace in Liberia, many refugees have decided to not return to Liberia. This may be due to a history of failed peace accords, maintaining a refugee status for a prolonged period of time, and feeling settled in Ghana. The refugee population of Buduburam has decreased substantially over the years (38,000 in 2006 vs. 11,000 in 2011),<sup>3</sup> and in recent years, humanitarian aid to the refugees has ceased nearly entirely. The UNHCR has supported

the settlement at various times throughout its history, beginning with the camp's founding in 1990 through 2000, following Liberia's 1997 elections. The UNHCR resumed material assistance and relief in 2002 but discontinued support in 2012.<sup>4</sup> The Liberian civil war reached a ceasefire in 2003.<sup>2</sup>

A limited amount of research on intergenerational differences and acculturation with respect to diet in refugee populations has been published,<sup>5,6</sup> despite the fact that refugees are a vulnerable population that are susceptible to food insecurity and diet-related health conditions.<sup>7,8,9,10</sup> However, numerous studies have qualitatively examined the association between refugees/immigrants and diet/nutrition. These qualitative studies suggest that the relationship between refugees/immigrants and their diet is complex. Many different factors influence the role of diet/nutrition for them within their host country, including lack of knowledge about newly available foods, generational differences in willingness to try new foods, and national identity. A study of refugees from 85 countries who had resettled in San Diego County, California found that lack of familiarity with available foods and poor nutrition knowledge was a major driving force behind nutrition-related health concerns such as undernutrition and unhealthy weight gain. The poor food choices made by these refugees were attributed to a lack of knowledge about foods available in the U.S.<sup>11</sup> Additionally, previous eating habits and experiences, neighborhood factors and socioeconomic status, and lack of health education posed dietary challenges. A study of refugees from Somalia, Sudan, Ethiopia, and Eritrea who had resettled in Australia found that while adolescents were eager to try newly available foods, adults were overwhelmed by the new and extensive food supply.<sup>12</sup> Other studies have examined the roles of acculturation and national identity in shaping dietary patterns among refugees/immigrants. A study on food culture among Hmong women in California found that



food was an expression of national identity, and food culture preservation presented a challenge to women with U.S.-born, highly acculturated children.<sup>13</sup>

As the worldwide refugee population continues to grow (there were 51.2 million forcibly displaced people in 2013, compared to 45.2 million in 2012),<sup>14</sup> it will become increasingly important to develop socio-cultural frameworks to address the specific health and nutrition needs of refugees.<sup>15</sup> Researchers from the International Health Program Office at the Centers for Disease Control and Prevention recommend that adequate relief programs address health and nutrition based on sound evidence.<sup>16</sup> Therefore, the purpose of this qualitative study was to understand among Liberian refugees in Buduburam Refugee Settlement: 1) dietary practices in Liberia prior to the migration to Ghana; 2) whether these practices changed since being at the camp, and if so, why; and 3) how the availability, accessibility, and cost of food sources, as well as dietary practices and cultural beliefs surrounding food, influence the way they eat. Specifically, this study qualitatively examines: a) intergenerational similarities and differences in dietary practices among a population of Liberian refugees living in Buduburam Refugee Settlement and b) similarities/differences with Ghanaians living in and around Buduburam Refugee Settlement. The key findings were used to develop a conceptual framework describing these relationships.

## **Methods**

### ***Study Design***

In-depth interviews were collected as part of a larger cross-sectional study that used both qualitative and quantitative methods to examine: a) shifts in dietary practices among Liberians since living in a protracted situation in a refugee settlement camp, Buduburam Refugee

Settlement, and b) the influence of Liberians on Ghanaians living in and around that refugee settlement. The grounded theory approach guided the qualitative data collection and analysis, leading to the development of a conceptual model describing the relationships among various factors contributing to dietary patterns among Liberians and Ghanaians.

### ***Participants and Recruitment***

This study used purposeful (convenience) sampling, as it was not possible to conduct probabilistic sampling for this qualitative study. Participants were Liberian and Ghanaian women age 16 and older who lived with at least one other female generation. UNHCR/NCS nutrition program staff working in the Buduburam Refugee Settlement identified Liberian and Ghanaian households that met the criteria, and locals such as the village chief identified eligible Ghanaian women in the surrounding villages. Six Liberian and six Ghanaian households were included in the final dataset for a total of 27 participants (14 Liberians and 13 Ghanaian). Nine interviewed households (4 Liberian and 5 Ghanaian) had two generations of women, and 3 interviewed households (2 Liberian and 1 Ghanaian) involved three generations of women.

### ***Data Collection***

In-depth interviews containing open ended and semi-structured questions were conducted separately with the grandmother, mother, and granddaughter (if she was 16 years of age or older) living in the household. Verbal consent was obtained prior to each interview. Interviews were conducted in either Twi (the local Ghanaian dialect) for Ghanaians or English for Liberians by a trained bilingual Ghanaian interviewer. One interview was conducted through an interpreter for a Liberian grandmother who spoke a Liberian dialect (i.e., Krahn). Interviews were tape recorded, and demographic information, including household size, employment status, and education level, was also collected verbally.

The semi-structured qualitative instrument consisted of three separate sets of in-depth interview questions for: 1) Liberian refugees born in Liberia, 2) Liberian refugees born in Ghana, and 3) Ghanaians. These in-depth interview questions were developed after key informant interviews were held with Liberians and Ghanaians to understand the dietary patterns among Liberians and Ghanaians.

The interview guide for Liberians born in Liberia included 25 questions about food habits in Liberia and their experiences related to food once they resettled in Ghana (Table 1). For example, the interview guide asks, “At the beginning, when you arrived in Ghana, were you able to find in the market all what you need for your traditional Liberian diet? Has it changed? How is it now?” The interview guide for Liberians born in Ghana contained 11 questions only related to their experiences with food in the settlement (Table 2). For example, participants were asked if they ate Liberian foods/dishes, and what the most common Liberian dishes they eat are. The interview guide for Ghanaians was similar to that for Liberians born in Ghana, but in the context of how their eating patterns differed from Liberians (Table 3). The survey for Ghanaians also asked about cultural differences between Ghanaians and Liberians, which was not asked of Liberians. All interviewees were asked about their cultural food beliefs, such as whether they believe oranges give malaria or if giving children rice before they can walk will prevent them from growing well (Table 4).

### ***Data Analysis***

All interviews were transcribed and those conducted in the local Ghanaian dialect of Twi were translated into English by the nutrition coordinator of the settlement prior to transcription. Domains, themes, and subthemes were initially identified by the first author, JM, through a thorough review of the interviews and subsequently revised and confirmed through a highly

iterative consensus process involving the rest of the co-authors (AHF, RPE). Coding was completed using ATLAS.ti version 1.0.40. Coded data was analyzed according to an agreed-upon code structure, and consensus was reached among a three-person team comprised of the author (JM) and two nutritionists (AHF, RPE) with expertise in qualitative analysis.

## **Results**

### ***Participant characteristics***

Table 5 shows the participant characteristics. Ghanaians and Liberians had similar median household size, although Liberians had an older median age. All Liberians interviewed lived in Buduburam, while Ghanaians were nearly equally split among Buduburam, Awutu, and the rural village. More Ghanaians than Liberians were married, and nearly twice as many Liberians as Ghanaians were widowed. Ghanaians had lived in Buduburam longer than the Liberians. More than half of Ghanaians and Liberians had some schooling (53.8% vs 57.1%), although Liberians had attended for longer. Unemployment was higher among Liberians than Ghanaians, and a higher percentage of Ghanaians compared to Liberians were self-employed. All Liberians interviewed were born in Liberia, and all Ghanaians interviewed were born in Ghana. None of the Ghanaians spoke any Liberian dialect, and none of the Liberians spoke any Ghanaian dialect; the only common language between the two groups was English.

**Table 5: Participant Characteristics<sup>a</sup>**

Characteristic	Nationality	
	Liberian (n=14)	Ghanaian (n=13)
Household size, people	7.5	7.5
Age, years (total sample)	37	33.5 <sup>b</sup>
Age, years (grandmother)	50	53
Age, years (mother)	31	27
Age, years (granddaughter)	19	22
Participant		
Grandmother	6 (42.9)	6 (46.2)
Mother	6 (42.9)	6 (46.2)
Granddaughter	2 (14.3)	1 (7.7)
Location		
Buduburam	14 (100.0)	4 (30.8)
Rural village	0 (0)	4 (30.8)
Awutu	0 (0)	5 (38.5)
Marital status		
Single	6 (42.9)	2 (15.4)
Married	3 (21.4)	8 (61.5)
Widowed	4 (28.6)	2 (15.4)
Partner (not living together)	1 (7.1)	0 (0)
Unknown	0 (0)	1 (7.7)
Years in Ghana	9.5	33.5 <sup>c</sup>
Years in Buduburam <sup>d</sup>	9.5	19
Education		
Attended school	8 (57.1)	7 (53.8)
Did not attend school	5 (35.7)	6 (46.2)
Unknown	1 (7.1)	0 (0)
Highest level of education, years <sup>e</sup>	9.5	5
Highest level of education <sup>e</sup>		
Primary school ( $\leq 6$ years)	1 (12.5)	5 (71.4)
Junior Secondary/High School ( $\leq 9$ years)	3 (37.5)	0 (0)
Some Senior Secondary School ( $\leq 12$ years)	3 (37.5)	2 (28.6)
$\geq 12$ years	1 (12.5)	0 (0)
Employment status		
Not employed	8 (57.1)	2 (15.4)
Self-employed	6 (42.9)	9 (69.2)
Employed	0 (0)	2 (15.4)
Born in Liberia	14 (100)	0 (0)
Born in Ghana	0 (0)	13 (100)
Language(s) spoken <sup>f</sup>		
English	10 (71.4)	2 (15.4)
Any Liberian dialect	11 (78.6)	0 (0)

Any Ghanaian dialect

0 (0)

13 (100)

<sup>a</sup> Table values are median for continuous variables and n (%) for categorical variables. Numbers may not sum to total due to missing data, and percentages may not sum to 100% due to rounding.

<sup>b</sup> Missing one mother and two grandmothers.

<sup>c</sup> Missing two values.

<sup>d</sup> Among those living there.

<sup>e</sup> Among those who attended school.

<sup>f</sup> Includes those who speak more than one language; numbers and percentages may not sum.

## ***Domains***

Seven domains emerged, forming direct and indirect pathways influencing dietary patterns among Liberian refugees and Ghanaians: 1) national identity (proxy for culture), 2) food preparation, 3) food availability, 4) food access, 5) social support, 6) food beliefs, and 7) nutrition knowledge.

### **National Identity (proxy for culture)**

National identity was a strong driver of cultural views toward food. The majority of both Liberian and Ghanaian women, regardless of generation, felt strongly that certain foods were inherent to their culture. One Ghanaian mother explained, “Kitteley is for the Liberians, we have not, we have not been eating kitteley. It’s not our meal; it’s for the Liberians, so I don’t eat kitteley.” Another Ghanaian mother elaborated: “We don’t buy them [Liberian foods] because they are not our traditional meals. Yes, I know they sell cassava leaves and potato leaves and people buy to eat. Some other people buy to eat, but for us, we really don’t like it. We don’t like it at all. It’s not our culture, it’s not our tradition, it’s not part of us.” Many Ghanaian grandmothers expressed similar sentiments as the Ghanaian mothers. A Ghanaian grandmother stated, “The Liberian foods is most often rice, rice, rice. So they don’t like to eat fufu, they don’t like to eat, it’s always rice and, and changing the sauce.” Another Ghanaian grandmother explained that she did not eat potato leaves because they were not part of Ghanaian culture.

“They [Liberians] eat the sweet potato leaves, but we don’t eat it, it is not part of [our] past so we do not eat sweet potato leaves.”

While Ghanaians often identified with their nationality through the exclusion of Liberian staples, Liberians women voiced the importance of certain foods, like rice, to their national identity. A Liberian grandmother stated, “Our major food at home the whole world knows that it’s the rice.” One Liberian mother noted, “The Ghanaians can’t eat rice, but we love to eat rice in our own. When you give me gari or banku, I will I swallow it but even if my gut is full, I will still eat rice.” The Liberians were cognizant of the cultural differences in terms of food preferences between themselves and the Ghanaians, with one grandmother saying, “Ghanaians...they are eating their banku, kenkey...But we Liberians...we want rice and [Liberian] fufu and GB [Liberian gumboy] ...that’s the one we can eat.” Overall, Liberians’ sentiments about traditional Ghanaian foods were not as negative as Ghanaians’ sentiments were about Liberian foods, which may signify that Liberians were more accepting of traditional Ghanaian foods.

### ***Cultural Exchanges***

Most Ghanaian women felt that their diet had diversified with the influx of Liberian refugees to Buduburam. When asked about whether or not the Ghanaians were eating traditional Liberian foods like cassava leaves and potato leaves before the Liberians arrived, one Ghanaian grandmother responded, “Before the arrival...people were not so much used to eat, but now so many people are eating it [traditional Liberian foods].” Similarly, a Ghanaian mother noted that her family preferred rice, a traditional Liberian food, to banku, a traditional Ghanaian dish: “We cook rice once in a week...because my brothers like rice more than the banku.”

Interacting with each other's culture also promoted the exchange of foods between Ghanaians and Liberians. A Ghanaian mother described her interactions with a Liberian friend: "I have a Liberian friend...Once in a while we'll visit each other. She's this woman here. She's, the woman here is a Liberian, she's my friend and we sell all, we all sell here in the market...We share foods together. Most often it's rice that she, it's often rice that she shares with me."

Sharing common spiritual beliefs also encouraged interaction with each other's culture and promoted cultural food exchange. A Ghanaian grandmother noted that, despite their different diets, she felt that she could eat with Liberians because of their common religious values. She explained, "They [Liberians] were our counterpart [from the Seventh Day Adventist church] on the refugee camp, [those] Liberians [in the] refugee camp do not also eat [fish with] scales and so I could eat with them and they could also eat with me because um we share common values, our religious values."

Conversely, those who had not interacted much with people of the other nationality did not understand each other's diets. A Liberian mother explained, "I really don't know [if there are any differences between the way Ghanaians eat and the way Liberians eat] because I don't really associate with the Ghanaians too much and I rarely see them eat." This sentiment was echoed by the older generation of Liberians as well. A Liberian grandmother said, "Really I can't tell you much about the Ghanaians way of eating because since I came here, I haven't really been close to any of them [Ghanaians] and they are not close to me. Even my church that I am in, I don't really see Ghanaians in there. So I don't have really [a] close person that's Ghanaian, uh huh. I don't really know." Another Ghanaian grandmother shared similar thoughts: "Because I don't go to the refugee camp, I don't interact with them [Liberians]. They can not influence me in any thing. The way I was trained is the way I'm living. So they haven't influenced me in any way. I



haven't interacted with them apart from going to buy from their market and coming back. I do not have any Liberian friends, I do not, I do not interact with them so it would be difficult for them to influence me.”

Liberian women's food preferences expanded as a result of cultural exchange. Liberians had a strong preference for traditional foods, but they diversified their diet for various reasons to include Ghanaian foods. A Liberian grandmother explained that her family will eat Ghanaian food when it is shared with her, even though she still prefers rice: “We eat it [Ghanaian food], when the people [Ghanaians] share the corn we eat it, sometimes we don't want to eat it so we sell it and buy rice.”

### ***Food Preferences***

Cultural food exchanges between Liberians and Ghanaians both influenced and were influenced by food preferences. In some cases, Ghanaian children and grandchildren were able to influence the diets of older generations of Ghanaians through their own food preferences and acceptance of new foods. Many of the children and young adults had been exposed to Liberian foods at school, and as a result, some Ghanaian adults within the households were more open to Liberian food and began integrating it into their overall diet. A Ghanaian grandmother explained, “We eat other foods of the Liberians like the cassava leaves, the eggplant leaves and the others. What happens is that my children always eat from our side so they buy all those foods from our side, but it's not like that in the house, it's not like that in the house. Umm it's my children who have been eating the Liberian foods more, much more than anybody else. Much more than anybody in the household. So they are able to buy and eat, but for us, it's the potato leaves that we like so much in the house.”

Alternatively, some Ghanaians had not accepted the shift in food preferences among their

children and grandchildren and were unwilling to incorporate Liberian food into their diet. A Ghanaian mother expressed that Liberian food is “not something we have eating before and it’s just because he went to school and he’s eating from there which would change our meal plan... We think it’s bad food.” Some Ghanaian women rejected eating Liberian food, despite encouragement from their children, because it was not part of their cultural identity. A Ghanaian grandmother noted, “The children can buy them [Liberian food] at school to eat, but um we, we do not like it, it’s not part of us, we’re not used to [eating it], it’s very difficult for us, just eat what we have not been eating. Our children have always been saying it’s very nice and that we should eat, but we haven’t eaten... We cannot just begin eating what we don’t know.” A Ghanaian mother stated: “It’s [Liberian food is] not our main meal. We just started eating it because of the arrival of the refugees so we, we began planting it. Even now, it’s not so many people are eating it so there’s not too much attention to the production of it. I hear also that the Ashanti eat it a lot, but we the Fanti, we don’t eat it. It’s just by chance that the Liberians came here and we started eating it.”

### **Food Preparation**

Food preparation differed between Liberians and Ghanaians, and this difference was understood across all generations. A Liberian granddaughter stated simply, “Their way [the Ghanaian way] of preparing the food is different, our way of we preparing the food is different.” A Liberian granddaughter explained how the two cultures prepared food with different main ingredients: “The Ghanaians food...it is corn that they can prepare their food with, most of their food are corn; and the Liberian people that’s rice they love, you know.”

### ***Texture***

Differences in food preparation extended to the texture and flavoring of the food. A Ghanaian grandmother further explained how the texture of the meals may differ between groups. She said, “I think the difference is that the Ghanaian palm nut soup is light and the Liberian palm nut soup is very thick. Why because our palm soup we use it for banku or fufu or something else, but with them their palm soup is eaten with rice so they make it very, very thick to look like a sauce to be eaten with rice.” The spiciness of the food also differed between Liberians and Ghanaians, with the Liberian women preferring to season their food with pepper. A Liberian mother explained, “For the Liberians if they fix it, we get, we get good taste like the pepper will be there, the salt, the chicken soup, all will be on same level, but for the Ghanaians if they fix it, they’ll leave out, there will be no pepper [meaning there isn’t much pepper added], it will not be nice and sweet.” A Ghanaian grandmother explained that peppery food hindered her willingness to consume that food. She said, “I think Liberians cook [with] a lot of pepper and so their food is always having lots and lots of pepper and that is why I am not able to consume so that is it.”

### ***Knowledge***

Limited understanding of how the other culture prepared their food restricted the ability of women to cook that food. A Liberian grandmother noted, “It’s not used to us the banku, the kenkey, we don’t know how to prepare it.” Likewise, the Ghanaians felt that if a food was not part of their culture, they did not know how to prepare it. A Ghanaian mother, speaking about preparing cassava leaves and potato leaves, which are traditional Liberian foods, explained, “We don’t know how to cook, how to use it to cook and we, we don’t know how to eat it [traditional

Liberian foods].” According to one Ghanaian grandmother, “Because we have never eaten cassava leaves, so we can’t eat it, we don’t know how to eat it.”

Alternatively, understanding how Ghanaians prepared their food fostered the adoption of Ghanaian food practices by Liberians. While traditional Ghanaian foods like banku and kenkey were new to many Liberians, understanding how this food was prepared increased the likelihood that Liberians would make it themselves. One Liberian grandmother who had never seen these traditional Ghanaian foods prior to her arrival in Ghana explained, “Where we are living, there is so [many] Ghanaians, we are living among Ghanaians. They can cook it and then we can see it. So from there ourselves we started practicing how to cook corn and how to mix it with food.” Many women explained that their friends from the other culture taught them how to prepare the different food. For example, one Liberian mother noted, “I have my [Ghanaian] friends...She teach me how to cook all the food and I cook all your [Ghanaian] food.” Many Liberians felt that they had accrued knowledge of Ghanaian cooking simply from living in Buduburam. A Liberian mother stated, “Everybody [knows] how to eat the Ghana food because we stay here now,” explaining that they had seen the food prepared and therefore cook it themselves.

### **Food Availability**

Ghanaians, overall, felt that food was readily available and accessible within their community. A Ghanaian mother stated, “There are lots of farms, lots of koko farms and on the koko farm you can have cassava and corn and other things. So there we are able to eat throughout the year and even with our new harvest we’ll make the old foods we harvested. So, so we, we don’t have food problems there. Sometimes our problem even is conservation, but not availability.” Other Ghanaians commented that while their dietary patterns had not changed from when they were younger, they were eating smaller quantities of food. One Ghanaian

grandmother stated, “The only difference is how much I was feeding at those times and how much I am eating now.”

### ***Garden***

Farming played an important role to Liberians as both a tradition and a means of procuring food. Reflecting on her upbringing in Liberia, one mother noted, “My mom was farming when I was small. My father too, it was tradition.” Upon moving to Ghana, some Liberian women were able to continue the practice of farming. A Liberian grandmother said, “Other people [Liberians] making gardens. Up to this time, I am not making garden, but they are still making garden.” Some women were able to garden through non-profit organizations operating in Buduburam Refugee Settlement. One Liberian grandmother explained: “We got the woman of destiny there [at a non-profit organization] doing some farming and one week from now we’ll harvest our palava sauce and it’s what we are doing there. So I do it also back home. I plant these small, small things, pepper, cassava, bitter ball, those things for harvesting.” Other women who had not been farming in Liberia were able to begin farming in Ghana. A Liberian grandmother noted, “I don’t make garden in Liberia. In Liberia, I don’t make garden and I don’t make farm, but here I came and I made garden.” Ghanaians also engaged in farming, with a Ghanaian grandmother noting, “We farm the potato, we farm the, the cassava and we have the leaves of the potato and we have the leaves of the cassava.”

### ***Quality of Land***

The quality of the land available for cultivation was an important factor in whether or not both Liberian and Ghanaian women were able to farm. A Ghanaian grandmother explained, “Because of the way people are fetching soil to deal, to dig, to dig, dig; dig the land to get soil to, to construct buildings. The land now is not fertile to, to, to, to grow crops. So I am not farming

now.” A Ghanaian grandmother noted that the land quality limited the food she was able to grow: “The cocoyam doesn’t do well here on this land. So only grow um, cassava and corn.” A Ghanaian mother added, “This town, this town, plantain doesn’t, doesn’t grow, cocoyam doesn’t grow well, coconut is not there, koko is not here. So conditions here are very tough so we are not able to get a variety of food. The only foods that grow well here are cassava and corn and so therefore, we only eat cassava and corn all the time.” A Liberian grandmother noted that some foods were difficult or impossible to grow: “If you have your backyard garden [in Liberia] you don’t need to buy those things, but here, the soil here, if you dig now, it’s a very big rock under here that when you plant anything, it will not come out, it will not germinate. ...In Liberia the soil that we have there is different from here. So most of the food we want to eat here is not here. The people are able to plant it even where I’ve found most of those foods here, it was in Kumasi.”

### ***Land Availability/Ownership***

Land availability/ownership also affected Liberian and Ghanaian women’s ability to garden. A Liberian grandmother explained that she had been given land, but the Ghanaian landlord later took the land back. She said, “The man took the land, the Ghana man took the land and said it is for him. He took the place and said we should move from...He came and he said the place is for him.” A Ghanaian grandmother explained the impact of losing her plot of land: “I was growing foodstuffs like cassava, groundnut and corn, plantain, sweet potato. Um but I have stopped farming now because uh I don’t have a plot now.” Another Ghanaian grandmother added, “Now where we are staying...we cannot farm, the hills are plots to farm. So the only way we get food is to buy. All, all the plots that we we’re using to farm, people have used to, to build houses. So now we don’t have places to farm.”

## ***Market***

Many Ghanaians reported that farming was their primary means of obtaining food, but they would turn to the market both when their food supplies ran out and as a source of income. A Ghanaian grandmother explained, “We farm corn, and...cassava. So we use our farm products, the corn and the cassava until they are finished and then we will be buying from Kasoa Market and the Buduburam Market.” Ghanaian women could more easily turn to other food sources, like the market or a garden, when food ran out than the Liberian women. A Ghanaian granddaughter said, “Sometimes, when the house [food] gets finished, we used to buy some at the market.” A Ghanaian grandmother explained, “Fortunately for us when the money was running out, then the new products, our new farm, we harvested our new farm products. So we were able to uhh, uh, so we didn’t run so much out of food or to stop eating.” This perspective was not shared by the Liberian women.

## **Food Access**

Liberian and Ghanaian women experienced varying degrees of cultural, physical, and economic barriers to food, which contributed to food insecurity and their resultant coping strategies.

## ***Cultural Access***

Liberian mothers and grandmothers felt that they lacked access to some traditional foods, while Liberian granddaughters felt that the foods they wanted were accessible. A Liberian granddaughter commented, “All the food is here,” while Liberian mothers commented on the lack of meat. A Liberian mother said, “If I want to cook dry meat or I want to cook fresh meat I can’t get it. If I want to cook any good fish like tuna fish, the snapper, lets say the cassava fish with rice, I can’t get it here.”

Ghanaians described how the food they were selling had changed since the arrival of the Liberians, indicating the influence the Liberians had on the market. One Ghanaian grandmother observed, “Before the arrival of the Liberian refugees, the kind of foods we were selling were quite different from now. For instance, we were not selling kittedey. Um but, during, when they came in, we’re selling lots and lots of kittedey. We’re not selling cassava leaves, we’re not selling potato leaves and then after their arrival we began selling all those ones. Especially when they, they, especially when they arrived there were so many and we were selling all these ones, but now they have left, they have left so we stopped selling. Unless there were people who could send to the refugee camp to sell. So understand we had some of them staying um in Awutu and some could even travel to Awutu Market to buy things.” Some Ghanaians reported selling traditionally Liberian foods at the market in order to meet demand from Liberians. A Ghanaian mother explained, “With the cassava leaves and the potato leaves, you know the Ghanaians don’t eat them so they [Liberians] were going to the Ghanaian farms to pay their farm owners for um cassava leaves or potato leaves. So they [Liberians] will come to and bring the leaves to the market and then to sell.”

### ***Physical Access***

Transportation did not seem to be a barrier to food for either Liberians or Ghanaians, although one Ghanaian grandmother explained that she needed to walk to the market due to poor quality roads. She said, “We walk from the village and walk to the camp because our road is no good, the vehicles do not want to plow our street. So the only thing we have to do to get access to the market is to walk.” While these sentiments were not echoed by other Ghanaians or Liberians, there may have been other women struggling to physical access food who did not voice these views.



### *Economic Access*

Liberians and Ghanaians felt that food in the settlement was expensive. A Liberian mother stated, “Maybe they [young people] want to eat fruit, like orange, pineapple, but we don’t have [money to afford] it.” Liberian women expressed that the food in Buduburam cost more than food in Liberia. One Liberian grandmother explained, “It’s [fruit is] here, but it’s expensive. In Liberia it’s not that expensive or Cote d’Ivoire... You can find them [fruit], but you can’t find them [fruit as] much as compared to our home.” The cost of food was also a barrier to cooking the foods Liberian women preferred. A Liberian mother explained, “When we used to cook in Liberia the food was all over, but here you will miss your cooking, because everything here is expensive.”

Both groups made changes to their diet and food preparation as a result of high food prices. A Ghanaian mother explained, “There are some times where me and my daughter will eat rice water. But because the price of rice has gone up, we don’t eat [rice] at all. My daughter like rice so much that it was the only food she was eating, but now things are very expensive. The rice is very expensive so we, we do scarcely eat it.” Several Ghanaians noted the high prices in the Buduburam market, saying that they preferred to go to the Kasoa market instead. A Ghanaian grandmother said, “From my household we were marketing from, we were buying our foodstuffs from Kasoa Market because it was relatively cheaper and you could find all you wanted there and also I was buying them from Kasoa Market to bring back to my house to sell. Rather than go without eating rice due to lack of affordability, many Liberian women instead altered their food preparation methods. Rice was so integral to Liberian culture that some women prepared and ate it by itself (“dry”) as opposed to in a soup or stew. Affordability of food staples such as rice and pepper limited an individual’s ability to prepare it how she preferred. As one Liberian mother

noted, “If you are eating the rice you could prepare it the way you want it if you have money.” This same mother explained, “Sometimes, I don’t have money I eat rice, dry rice... You cook the rice and then you put, the, the red oil, no soup.” Another mother elaborated, “Sometime if you don’t have money, you will cook the rice but maybe in the soup there would be not enough meat inside, but then when you have money, then you cook it.” The practice of cooking rice by itself when money was tight was echoed by a Liberian grandmother. She said, “If I don’t have cassava and no fufu at all, I just manage it and I would buy rice. I will buy three cups, and you can cook it and we eat it dry.”

### ***Food Insecurity***

Both Liberians and Ghanaians experienced food insecurity. One Liberian grandmother explained, “When my money is small you buy small food you will eat for short time. When the money is plenty you will buy plenty and you will eat for long time.” While most household interview respondents reported changes in their diets in the past six months due to lack of food or money to buy food, Ghanaians experienced less severe food insecurity compared to Liberians. A Ghanaian mother reports, “We experienced one, one moment like that when our food got finished and the money [we] had to buy, we used to buy food [and it] also got finished and we didn’t have charcoal to sell to make money.” Indeed, there were some Ghanaian households that expressed being food secure. There were Ghanaian households in which women reported that they were able to eat the foods they wanted. A Ghanaian grandmother explained, “There hasn’t been any changes at all in the way we eat our foods. We are able to eat maybe three times in a day and sometimes as we want to.” A Ghanaian mother clarified that, while she only ate two meals per day, she did so of her own volition. She said, “I eat two meals in a day. It’s not, it’s not because em, it’s not because I’m food insecure, it’s because I don’t have the appetite to eat.”

All Liberian women reported not having money to purchase food at certain times. A Liberian mother said, “Sometimes you don’t have money [to purchase healthy food].” One Liberian grandmother said, “There is nothing to the house, no food, no money.” Another Liberian grandmother explained, “Sometimes we find [food], and it can be [meager], sometimes we find it we eat, but if we don’t find it, we don’t eat.” A Liberian grandmother said, “For us, any food we can get we will eat. The issue is that we do not have food, so any food we have available we will eat.” These responses indicate that Liberians were experiencing more severe food insecurity than Ghanaians.

### ***Coping Strategies***

Food insecurity was a driver of food preferences and the coping strategies employed by Liberian women. Liberian women strongly voiced their preference for rice. One mother stated, “When I don’t eat rice to me that’s sacrifice.” Ghanaians did express similar sentiments about traditional Ghanaian foods. Liberians and Ghanaians employed similar coping strategies to manage food insecurity, including reducing the variety of food eaten and decreasing the quantity of the food and meals consumed.

### ***Reducing Variety of Food***

Many women managed food insecurity by limiting the variation, and presumably the quality, of their diets. A Liberian mother explained, “You want to eat [a] certain thing, but you don’t have the money so you eat one thing over and over again.” A Ghanaian mother shared a similar practice. She said, “The kind of food we prepare in the morning is the same food we eat in the afternoon and is the same food that we eat in the evening. For instance if we prepare banku in the morning, some is left for the afternoon.” This same mother explained, “We don’t have that money to buy food and to come and keep [it] and not eat it or be changing variety. It is better we

buy the kokonte and keep eating it till it's finished and then we eat another one and buy some, some other food to eat.”

### ***Substituting More Economical Food***

Ghanaian women shared that they purchased more economical foods, such as kokonte, when they were experiencing food insecurity. A Ghanaian mother explained that the food she purchased “depends on the circumstances and how much finance we have at that particular moment. If you have enough money you buy, you buy corn to prepare banku. But if, if you do not have enough funds to buy, you buy kokonte.” Another Ghanaian mother shared a similar view, stating, “You look at how much quantity of, how much money of you have, the quantity of food you need and then you make a decision. So most often we buy kokonte, which lasts longer than the corn.” This practice was shared by Ghanaian grandmothers. One woman explained, “The best we can do is to buy the kokonte so that it will last longer for the family. We will be able to feed it, feed our need for a longer period as compared to, eh the corn.”

Liberian women practiced a similar coping strategy. Despite its importance to their diet and culture, Liberian women described purchasing less expensive food to manage their food insecurity. One Liberian grandmother stated, “I will buy cassava because I know the rice... if the money is not sufficient for rice...rice is dear, cassava is cheaper, so I that's cassava I will buy and be managing it small small, because the money is not there.” A Liberian grandmother explained that she would eat kenkey, a traditionally Ghanaian food, when she was experiencing hunger. She said, “Sometimes I'd be hungry in the night and the children bring kenkey “self” and we eat it oh. Sometimes I don't eat the whole day and they are selling it right here. Somebody help me with 2,000, I buy kenkey.”

### ***Reducing Quantity of Food or Meal Frequency***

The most common coping strategy both Liberians and Ghanaians used to manage food insecurity was reducing the quantity of food or frequency of meals. A Liberian mother said, “We eat only one time. We don’t eat in the morning, afternoon, [and] evening.” Another Liberian mother explained, “The changes I have made are that the food, the food that I was used to eat, now everything expensive so we, we cut the food down... We used to eat two times a day when we had money. So we eat one time now.” A Ghanaian mother said, “We cut down the quantity of food and the meals, the frequency of meals we eat.” A Ghanaian grandmother explained, “We have had occasions where the adults have to eat only once in a day. But um, well we manage, for once, we always have once, we’ve never had a situation where somebody will not eat throughout the whole day, we haven’t experienced that. If we do not have, I mean we will not eat the breakfast, we will not eat the lunch, but for supper, we must eat supper. So no matter what we do, no matter what the food is, if we do not have food at all, we will reserve the food that we have available for evening. So whatever be the case, every adult must have supper.”

### ***Buffering Children from Food Insecurity***

In some instances, Liberian and Ghanaian adults employed the coping strategy of buffering children against food insecurity. One Ghanaian grandmother stated, “I reduced the quantity of seven to the children, but not the adults. I reduced the quantity for the children because the children didn’t have to complain. They don’t, the children will not complain and take only what they have been served. But for the adults they will complain a lot and so I have to serve the adults more than the children. So the normal food that the children were eating was, was reduced over the 6 months, but em the normal food, em but the food that the adults were eating was not reduced, it was the same quantity they were eating...the children will definitely

eat their three square meals in a day. If you do, it's reduced, they eat in the morning, they reduce quantity and eat in the afternoon, they reduce quantity and eat in the evening and they reduce quantity. But for the adults, they will skip a meal and they will eat twice in a day.” One Ghanaian mother stated, “It's only the adults that we reduce the quantity and the number of food we eat and depending on the situation if we have very less food to eat, we eat one meal a day which we will be eating in the night. But em, for the children we don't, we don't reduce the quantity or frequency of meals they take in a day. Sometimes also the one meal that we could eat, we could divide like the supper into two and then take half of the supper and then for the morning we take for breakfast. So that we will be able to have the next day's supper, we divide the next day's supper also into two. So in the long run, the food that we eat, our meal in the evening could be divided into two and take half that evening and half the next morning.”

In other instances, adults were not able to buffer their children, especially when their household was experiencing severe food insecurity. This was evident only among Liberian women. One Liberian mother reported feeding her baby water for a meal if nothing else was available. She explained, “If I have it [breakfast and supper], I give it [to the baby], but if I don't have it she will drink water.” Another Liberian mother explained that there were times when she would not have enough food for her baby. She said, “When I [am] ready to cook small part now, I share to everybody, and they eat, but as we don't get it I will not [be able to even] give it to the baby.”

### **Social Support**

Respondents expressed the importance of spiritual, government and non-government support, and family support, which is collectively referred to here as social support, in acquiring food.

### ***Spiritual Support***

Both Liberians and Ghanaians displayed strong beliefs in God to provide them with food. As one Liberian mother stated, “We [were] eating...for the last six months God was providing it.” Another Liberian mother said, “It’s just by the grace of god, it’s just, we were getting food to eat for those process... I never can remember them because we have just...I never, I have not got rations since I came here.” Similarly, a Ghanaian mother stated, “It is god who is taking care of us, so generally when all our food is finished we get money also to buy.” Despite attributing some of her ability to access food through her work, a Ghanaian grandmother felt that God was ultimately responsible for providing food for her family. She said, “Because I serve food, I always had food. Um my grandchildren never stopped, never stopped my grandchildren of food. God always provided for us so it was fine.”

### ***Government and Non-Government Support***

Refugee status itself played a role in both actual support the Liberians received and how Ghanaians perceived this support. One Liberian grandmother recounted begging for food, saying, “I plea[d] because I [am] a refugee now.” Several Ghanaians expressed the sentiment that Liberians were being well-supported by the government or non-governmental organizations supporting the refugee population. One Ghanaian mother noted, “I see the Liberians are really enjoying. Looking at how they live [it] is better than we do here in the village. Liberians receive corn and other foods that the government is giving them. But we, we don’t receive anything. For instance, they [the government] give them rice [*Mother is told Liberians receive corn, not rice*]. Ok, even if it is corn... if we were also given corn, we would make very good use of it.”

Contrary to Ghanaian beliefs, Liberians explained that they have been supported mainly by family, as opposed to government or nonprofit sources. One Liberian grandmother recalls

asking a nonprofit organization assisting with a medical clinic in Buduburam for help, but did not receive any. She explained, “I’m a widow. I do not have a husband. They say when we go there [to Buduburam] we’ll do some baking and also at other times I will give her pieces of bread and give us something for us to wash our clothes. So she was able to bring, to come here and when she came, she asked [a non-governmental organization] to help me. And since then, [that organization] have not been doing nothing. And I am just here with my children, you can look here.”

### ***Family Support***

Liberian women expressed strong dependence on their husbands or mothers for assistance with shelter and acquiring food through either the market or the garden. Support may have also shaped dietary practices. One Liberian grandmother noted, “It is difficult for those of us who don’t have anybody to send you something to eat for the food that you are supposed to eat. Like today, we ate yam.”

A change in family structure or circumstances had an impact on the level of support experienced by both Ghanaians and Liberians. This theme, however strongly it was expressed, was voiced by only a small number of women, which may indicate that these experiences were either rare or went unspoken. For example, a Ghanaian grandmother explained how the death of her husband made accessing food more difficult for her family. She said, “When my husband was alive, every month he gave me money for the housekeeping and then I could even use those monies to help in my trade and then the product that came, I used that to cook in the house. But now it is very difficult to get food because we have to rely on this small trading I have and am doing...times are difficult more than when my husband was around.” Liberian women commented on the support they had from their husbands in Liberia, although the changes in



dietary patterns they experienced upon moving to Ghana may have been due to food availability rather than a shift in the level of support from their husbands. For example, a Liberian mother recalled, “Sometimes back in Liberia, my husband was a forester and he worked in the forest. So really for me, we never had problem with meat.” Another Liberian mother explained how her husband’s position as mayor when they were in Liberia had contributed to high food access. She explained, “My husband was a sitting mayor. And we had a farm; we had people there that hunted for us. Like mostly in Liberia and in Grand Gedeh County where I come from, plenty of meat. We got plenty meat. We sit out here and get ours, we can see the people hunt and bring meat for me. I had my hunter that bring meat. Then the fish, we had a fish farm at the backyard of the house.”

### **Food Beliefs**

In discussing health and child development beliefs regarding certain foods, strong traditional beliefs were voiced about rice and pepper, two foods with strong ties to the Liberian and Ghanaian communities.

#### ***Rice***

Liberians and Ghanaians generally believed that giving rice to babies would impair their ability to walk. A Liberian grandmother said, “Some [young] children, if you give them the rice, they can’t walk soon.” When prepared in a special way, however, both Liberians and Ghanaians believed that rice was good for the health and development of young children. A Liberian mother explained, “You can give your baby rice, but not plenty rice, not the rest that you yourself you eat. Maybe you can cook small and you make it soft, not make it hard like the one big person can eat and you feed the child small, small, small, small, but the rice shouldn’t be plenty for the child, small and soft.” A Ghanaian mother shared similar views: “Rice is very good when,

especially for small children when you make it softer you add well-prepared stew to it and then feed the children it will make them grow well.”

### ***Pepper***

Liberians believed that pepper would make a baby strong, while the Ghanaians felt this was an outdated belief. A Liberian mother explained this practice: “They [Liberians] pepper the child...They put it in the nose...and they put it in the buttocks...It goes straight to the brain...They make the brain hot...It can make baby strong.” When asked if giving pepper to a child will make him grow up strong, another Liberian mother shared a similar belief. She said, “Yea...everybody believes that.” Ghanaians, however, viewed this belief about pepper as a strictly Liberian one. A Ghanaian grandmother explained, “I think is with the Liberians. Ghanaians I think don’t do that, but I have seen Liberians here on camp do that to make their children strong.” A Ghanaian mother agreed, saying, “That is not true. That used to be an old perception. People used to believe, but that is not too good.”

### **Nutrition Knowledge**

Several themes emerged from the interviews regarding nutrition knowledge and dietary patterns, including gaining information from health providers in the camp or area clinics, feeling that all food is healthy or not knowing which foods are valuable to health (referred to as nutritional value of foods), and selecting foods based on availability/accessibility regardless of nutrition. Ghanaians and Liberians expressed differences in nutrition knowledge, but there was no evidence of pronounced generational differences.

### ***From Healthcare Providers***

Providers within health clinics were a source of nutrition information for both Ghanaian and Liberian women. One Ghanaian grandmother explained, “All the starchy, starchy foods

when I'm, when I'm sick they ask me not to eat them because they don't promote good health."

A Liberian mother said, "They [people at the clinic] told me that I should, to get more blood I should eat food that will give blood like potato greens, the palm nut soup, the beans and that I should also drink bissa with low sugar in it."

### ***Nutritional Value of Foods***

Ghanaian women were more likely than Liberians to believe that certain foods had more inherent nutritional value than others. A Ghanaian grandmother explained, "There are some foods that you eat which will give you strength, some foods that you eat that wouldn't give you strength." She continued, "I think some of the foods that people eat and will not be healthy are for instance like banku. Some people don't like to eat um banku so they wouldn't eat kenkey. And some people do not like to eat, to mix the corn dough with the cassava dough to prepare the banku because like it's not healthy." Another Ghanaian grandmother agreed that there are some foods that promote growth. She said, "Foods like beans, beans is very good and they can promote your growth. Beans, beans, and my people locally always call it asedua." On the contrary, Liberian women either saw food as beneficial overall or did not have an understanding of what food is healthy. One Liberian grandmother noted, "Food is nothing, but food. It's good for your body." Another Liberian grandmother said, "Right now I don't even know what they will [need] eat to be healthy. I don't know."

Other women felt that the nutritional content of food depended upon how it was prepared or served. A Liberian mother explained, "The potato greens is healthy food, the cassava leaves is healthy food, so all the rest of the food, all depends the way you prepare it, the way in which you prepare it and the ingredients that you put in it. They are all healthy food." Similar views were shared by a Ghanaian grandmother. She said, "It's because of the way it's prepared. For instance,

the kernels, the kernel, the husk of the kernel is taken off making it very, very light. People eat it and there's no new strength gain from it and they don't develop, they don't have strength." A Ghanaian mother added, "It's quite difficult to tell which food will not make you grow well, which will not make you grow well, it doesn't. Like for instance if you consider banku, banku is good. I think all the foods are good depending on how you eat them."

### ***Healthy Food is What is Available***

For other women, dietary practices were driven more by the foods that were available and accessible to them rather than the nutritional content of the food; they felt that any food that helped them live was healthy. A Ghanaian grandmother explained, "I don't know what is good food and what is bad food. All we eat is what we have to eat. We, to be honest, we, we don't really have food ever since our life we have eaten these kinds of food, so we believe that these are the foods that will make us healthy." A Ghanaian mother further elaborated on the theme of eating whatever food is available. She said, "The things we eat we do not know if they are healthy or not. When serving our foods, we eat one kind of food and that is what makes us survive so we believe they are healthy foods. Like the cassava and the corn, the kontomire and tomato soup and the pepper, palmtree soup and groundnut soup." A Ghanaian mother echoed similar sentiments. She said, "All foods are foods, all foods we consume what we have." These views were expressed by the Liberian women, albeit less frequently. For example, one Liberian grandmother said, "When the family eats, they will be very healthy."

### **Dietary Practices Conceptual Diagram**

Figure 1 shows the conceptual diagram that emerged from the analysis process and final results. The conceptual diagram shows a complex web of intersecting domains, centered on access and food preparation. Social support was a predictor of food availability, which in turn

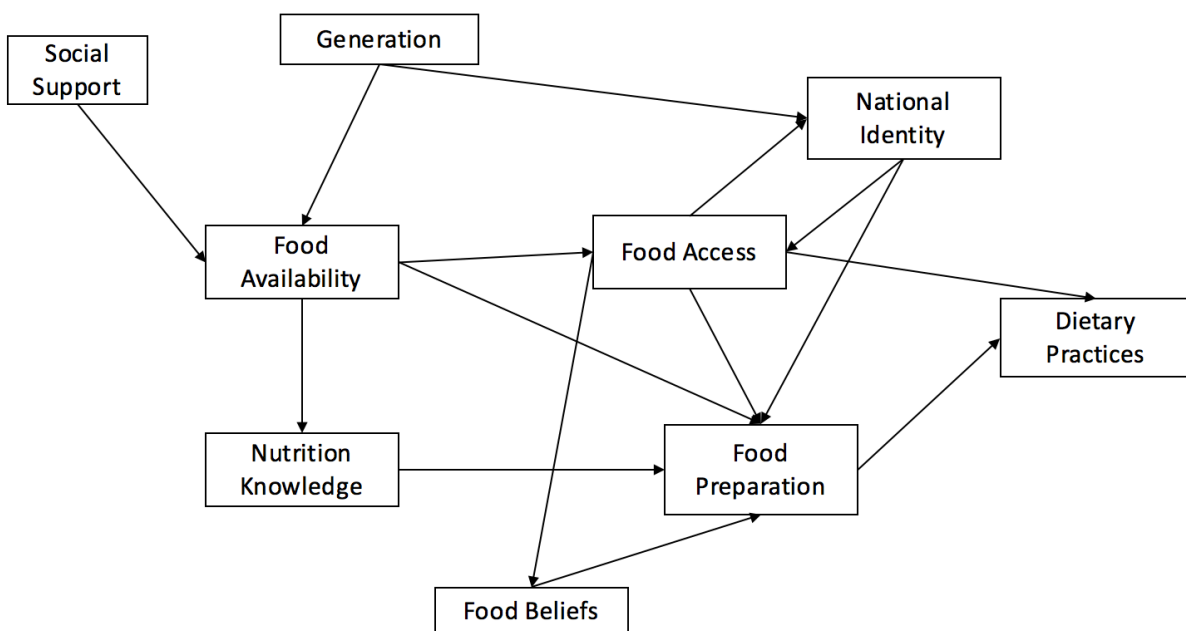
influenced food access. Households with greater support, usually through family members, expressed more food security than those with limited support. Generational differences were also associated with availability; younger women were more likely to feel that food was readily available than older women. For some women, nutrition knowledge directly influenced food preparation; they felt that the nutritional content of food varied based on how it was prepared. In this way, nutrition knowledge acted as a mediator between food availability and food preparation. Other women, especially those experiencing food insecurity, ate the food that was available to them, regardless of nutritional content. For these women, food availability directly influenced food preparation.

Liberians and Ghanaians held strong beliefs regarding the health benefits of certain foods, which influenced food preparation. For example, rice aided in child development, but only when it was prepared a certain way. Despite strong beliefs about the health and developmental benefits of certain foods, some Liberian women turned to eating foods they believed may cause disease to cope with food insecurity. One Liberian granddaughter explained that she would eat mango when she was hungry, despite her belief that mangoes promote malaria.

Food access, which encompassed cultural, physical, and economic access, was driven by availability and national identity. For example, while most Liberians and Ghanaians felt that culturally-relevant food was available, it was often inaccessible due to cost. Access and national identity (a proxy for culture) had a bidirectional relationship; food preferences informed which foods were culturally-relevant and the coping strategies the women employed, while having access to different foods encouraged cultural exchange. Access and national identity were also drivers of food preparation. Generational differences drove food preferences and cultural exchange, with younger generations of women more likely to be exposed to and willing to eat

foods outside of their culture. National identity influenced food preparation, directly or indirectly through access. For some women, food preferences determined the ways in which they prepared food. For other women, access and food insecurity posed challenges to food preparation, and the coping strategies they used, such as reducing the quantity of food, reflect changes in food preparation. Food access and food preparation were the primary drivers of dietary practices. Having access to culturally-relevant, physically accessible, and affordable food was a prerequisite to all dietary behaviors experienced by these women. The relationship between food access and dietary practices was also mediated by food preparation; food insecurity and the resulting coping strategies affected the ways in which food was prepared, which, in turn, shaped dietary practices.

**Figure 1: Conceptual Diagram**



## Discussion

Our qualitative findings provide key insights into the major factors driving dietary practices among refugees and local communities in and around a former refugee settlement. These findings support prior research on resettled refugees showing how nutritional habits are influenced by familiarity with available foods and acculturation.<sup>11</sup>

National identity was a major domain that emerged from the interviews, expressed through cultural exchange and food preparation. Ghanaians were particularly vocal about which foods were central to their culture (e.g., kenkey) and which were Liberian staples (e.g., rice and kittedey). Statements such as “It’s not our meal; it’s for the Liberians” were common among Ghanaians when describing Liberian foods. Liberians did not appear as willing to discriminate against traditional Ghanaian foods as Ghanaians did toward traditional Liberian foods, perhaps suggesting greater acceptance by Liberians towards Ghanaian foods due to refugee status and severe food insecurity. Findings showed that Liberians who were familiar with Ghanaians were more likely to engage in cultural food exchange and prepare Ghanaian foods. These findings are supported by Hadley and Sellen’s research on food insecurity among Liberian refugees in the United States, which found that the majority of Liberians cooked only Liberian food because they did not know any other recipes.<sup>17</sup>

Food preparation, including texture and knowledge, emerged as a central domain influencing dietary practices. The fact that five food preparation factors were found to directly influence food preparation underscores the multiple and complex ways by which food preparation influences dietary practices. Most Liberians and Ghanaians agreed that they had different ways of preparing food. Many of these differences in preparation were related to texture and seasonings, which were, in turn, associated with national identity (e.g., Liberians preferred

food with pepper). Cultural exchange fostered food preparation among both Liberians and Ghanaians. Notably, availability of Ghanaian food led to an increase in Ghanaian food preparation among Liberians, although Ghanaians may have been less likely to prepare Liberian food because they did rely as much on the market for their food as the Liberians did. Finally, coping strategies were a strong influence on food preparation, as both Liberians and Ghanaians reduced the quantity and types of food they consumed as a result of food insecurity.

These interviews show the shifting food acquisition methods among Liberians, from farming in Liberia to purchasing foods in markets in Ghana. While a few Liberian women were able to farm in Ghana through their own plots or different organizations gardens, for many women, the move to Liberia marked a transition in the sources through which food was available to them. Ghanaians often turned to the market when they were no longer able to produce food from their garden, but Liberians were more likely to rely on the market as their sole source of food. The market was therefore a means of mediating the effects of food insecurity among Ghanaians.

Liberians and Ghanaians experienced food insecurity to different extents, with Ghanaians were more likely to say that the food they wanted was both available and accessible. While some Ghanaians expressed that they were food insecure, all Liberians experienced food insecurity. Our findings about food insecurity among Liberian refugees are supported by prior studies. In their study of Liberian and Somali Bantu refugees in the United States, Patil et al. describes how socioeconomic factors, including food insecurity, are both directly connected to diet and activity and ethno-cultural norms such as social integration and cohesion.<sup>18</sup> Our results differ in that we did not find culture (described in this paper under national identity) to mediate the relationship between food insecurity and diet. Further, Patil et al. found a one-way relationship between



ethno-cultural norms and socioeconomic status, while we found a bidirectional relationship between national identity, a proxy for culture, and food insecurity.

Both Liberians and Ghanaians experiencing food insecurity employed many of the same coping strategies, such as reducing the quantity of food they consumed and changing the type of food they ate. Liberians, however, faced more severe food insecurity than Ghanaians, and as a result, had to resort to more extreme coping strategies, such as giving children only water when hungry. Patil et al. found that, even though traditional food was available to them in their host community, all refugees mentioned that it was more expensive than food in their home country. Study findings showed that having a strong social support network increased food availability, which influenced dietary practices through food access and/or food preparation. Patil et al., however, found that social support in times of need directly influenced diet and activity.<sup>18</sup>

Despite their food insecurity, Liberians expressed strong opposition to giving up their traditional food preferences. Rice was a central food to Liberians and strongly tied to their national identity; as a result, Liberians would make every effort to incorporate it into their diet, including eating it by itself if they could not afford to cook it in a soup or stew. Statements indicating that going without rice was a sacrifice illustrate the significance of rice to the Liberian diet and to a sense of identity. Ghanaians did not make similar statements regarding traditional Ghanaian food such as banku or kenkey. Ghanaians were more likely to be food secure than Liberians, limiting the ability for them to make such choices about traditionally Ghanaian foods. These findings support prior evidence that dietary acculturation is multidimensional.<sup>18,19</sup> In a study of health beliefs among Oromo, Eritrean, Ethiopian, and Somali refugees in Minneapolis, Simmelink et al. explored health beliefs and assimilation among refugees and their host community.<sup>20</sup> They found that, while assimilating to the host community can lead to changes in

identity, failure to assimilate can potentially limit access to and exchange of health resources. In a study of Somali, Sudanese, Ethiopian, and Eritrean refugees in Australia, Wilson and Renzaho describe how changes in both the foods that were prepared and food preparation techniques upon resettling in Australia lessened these refugees' sense of purpose and identity.<sup>6</sup>

Both Liberian and Ghanaian households voiced strong beliefs regarding rice and health/child development, although their views on the health benefits of pepper differed. Liberians and Ghanaians agreed that rice was a good food for young children and would help them grow, although it had to be prepared “soft” and in moderation. The finding that rice had significance to both nationalities was surprising, given the centrality of rice to the Liberian diet and the Ghanaian's identification of rice as a Liberian food. Ghanaians did not believe that pepper would make a baby strong, although Liberians did. The belief in the importance of pepper is consistent with the Liberian diet, of which pepper is a major ingredient. At least one Ghanaian woman, a grandmother, explained that, because of their similar religious values, she could eat with the Liberians. Given the strong spiritual beliefs the women expressed in terms of support, emphasizing religious commonalities may be one method for encouraging cultural food exchange between Liberians and Ghanaians. This strategy, however, could prove to be a challenge, as prior studies among refugees suggest that religious identities do not influence beliefs as much as location of origin. A study of Burmese refugees who had resettled in Massachusetts found that health beliefs were more dependent upon where a refugee was from rather than his or her religion.<sup>21</sup> Another study found that some Somali Bantu refugees who had resettled in Kenya were ill-treated due to their outsider status, despite sharing a common language and religion.<sup>22</sup>

Generational differences emerged in regard to food preferences and cultural exchange,

with younger generations of women more likely to have exposure to and be accepting of traditional food from the other nationality. This finding supports prior research on dietary acculturation among refugees, in which children's food choices were influenced by those of their peers. Rondinelli et al.'s study of refugees who had resettled in San Diego County found that parents were concerned that their children, who had been exposed to an American diet at an early age, were more likely to adopt those dietary habits than those of their native culture.<sup>11</sup> These concerns were shared among many Ghanaian mothers and grandmothers, who pushed back against incorporating traditional Liberian foods into their home. Patil et al. also found that children influenced adults' dietary practices, although parents were concerned more about the health implications of their food choices rather than issues related to national identity,<sup>18</sup> while study findings showed national identity was the primary concern.

Young Ghanaians, who had access to Liberians and their traditional foods through school, were likely to adopt Liberian foods in their diets, suggesting that exposure to Liberian foods mediates an acceptance of the Liberian refugees' traditional foods by the Ghanaians. While not all Ghanaian households were accepting of traditionally Liberian food (the belief that "it's not part of us" was echoed by several Ghanaians), it is significant that some households reported preparing Liberian dishes as a result of exposure to them. Exposure to the other nationality's food was not limited to grandchildren; Ghanaian women who had access to Liberian food through Liberian friends were more likely to prepare it than those who did not. Interactions with the other nationality helped to foster cultural food exchange, in turn shaping dietary practices.

Liberians, overall, were more willing to prepare Ghanaian foods, perhaps as a result of their severe food insecurity, continual exposure to the local communities in and around the settlement, and the availability of certain foods. Their willingness to eat foods outside of their

cultural norms may have also influenced Liberians' perceptions of food availability, as younger Liberians were more likely than older Liberians to feel that food was available. This finding is consistent with a qualitative study on Liberian refugees' reflections on their time in Buduburam Refugee Settlement, which found that cultural exchange was more prevalent among younger Liberian refugees than adults.<sup>23</sup>

Liberians lamented the unavailability of certain foods and food growing practices they were used to in Liberia, including fruit, meat, and fish. Additionally, the majority of Liberians could not farm because they either did not have access to land or the land available was not good for farming. Liberians, therefore, relied heavily on the market to provide them with food. Conversely, the majority of Ghanaians farmed their own food, sold the surplus, and purchased food from the market only when they were unable to farm due to a bad crop yield or illness. The Ghanaians felt that the Buduburam market had grown substantially over the years, likely as a direct result of increased demand after the arrival of the Liberians to the settlement. While previous studies of refugee dietary practices describe how refugees adapted to the new foods available to them in markets,<sup>12,13,24</sup> to our knowledge, none have shown how market demand from immigrants/refugees drive supply. In their study of refugees who had resettled in San Diego County, Rondinelli et al. found that some refugees preferred to go to smaller markets where they may find more culturally-relevant food.<sup>11</sup>

Many women, both Liberian and Ghanaian, expressed strongly that God was responsible for their food, making statements such as, "It is God who is taking care of us" (Ghanaian mother). These findings are supported by prior research on Somali, Sudanese, Ethiopian, and Eritrean refugees in Australia, which found that food beliefs were often bound to religious beliefs; many of these refugees believed that their health, including whether they developed

disease, was in Allah's hands, regardless of their diet.<sup>6</sup> In our study, Ghanaians felt that Liberians were well-supported by the government and local nonprofits, and as such, had greater mobility. Some of these statements may have been motivated by the Ghanaians' general feelings toward the Liberian refugees. Liberians, on the other hand, explained that the majority of their support came from family, including husbands, mothers, and daughters. Additionally, a change in family structure had a tangible impact on Liberians. For example, a loss of a spouse may mean that they could no longer rely on someone else to hunt food for them.

Ghanaians and Liberians both drew nutrition knowledge from what they were told about food in the clinic, but Ghanaian women were more likely to believe that some foods were more nutritious than others. Some women felt that the healthfulness of food was determined by how it was prepared. The belief by some women that any food was healthy may have been a response to the availability and accessibility of food in the context of widespread food insecurity. For example, Liberians experienced severe food insecurity, and they were more likely than Ghanaians to believe that any food sustaining them was healthy. Liberians faced widespread food insecurity, and the belief that eating any food is healthy is perhaps a reflection of this.

This study has limitations; chiefly, due to the unique setting and circumstances of Liberians and Ghanaians in Buduburam, this study may not be generalizable to all refugee settlement settings. However, this setting did provide a very unique opportunity to understand how immigrant and host communities' dietary practices change when their cultures intersect. Further work is required to determine how food practices in other former refugee settlements compare, and if the themes that emerged from these interviews are comparable to other settings. Additionally, participants were identified through UNHCR/NCS nutrition program staff working in Buduburam. The convenience sample used in this study may not represent all of the nutrition-

related practices of women living in Buduburam. Our selection criteria, however, ensured that a diverse group of Ghanaian and Liberian women of multiple generations were included in the sample. Based on our criteria and thematic saturation achieved, we believe our findings do represent that situation in the settlement at the time of the study. Overall, these interviews may provide a more complete understanding of the dietary behaviors among Liberian and Ghanaian inhabitants of the Buduburam Refugee Settlement than the previously analyzed quantitative data would alone.

### **Implications for Research and Practice**

Findings from this study contribute to a better understanding of the ways in which dietary beliefs and practices are shaped by one's environment, especially in a cross-cultural setting. The close proximity in which Liberians and Ghanaians came into contact in Buduburam may have allowed us to gain deeper insight into how exposure to the host country affects dietary beliefs and practices among refugees. Additionally, the inclusion of two to three generations of women in each household allows us to examine the ways in which generational changes may have an impact on these beliefs and practices. These findings have relevance to public health, as they shed insights into dietary exchanges and dietary acquisition within refugee/immigrant populations. Furthermore, they strongly suggest that nutrition education, food availability, and access issues need to be addressed with well thought out, culturally-sensitive programs targeting both the refugee as well as the host communities. These programs need to anticipate the dietary practice changes that are likely to take place as result of bidirectional food interactions among both groups.

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## Tables

**Table 1: In-Depth Interview Questions: Liberian refugees born in Liberia**

1. Where in Liberia are you from? Is it a rural or an urban area?
2. Can you tell me at what age you first left Liberia?
3. Can you tell me where you lived before coming to Ghana? (Probe for age when left and arrived in each place)
4. When did you first come to Ghana? How old were you?
5. How did you use to get food in Liberia? (farming or gardening, buying in market, etc)
6. What dishes did you use to prepare in Liberia?
7. In thinking back to when you lived in Liberia, on a normal day, could you tell me what other foods (i.e. tubers, greens, meats, fruit, etc.) you ate in Liberia?  
Probe: Please ask participants to describe what the foods looked like. (See if we can find pictures to show participants)
8. When you first arrived in Ghana, could you remember what foods you ate? (What foods were available for you to eat?) (Liberian food vs. Ghanaian food)
9. Where those foods different of what you used to eat back in Liberia?
10. When you arrived in Ghana, how did you get foods to eat? *Did you buy them, did you prepare them or were they given to you?*
11. At the beginning, when you arrived in Ghana, were you able to find in the market all what you need for your traditional Liberian diet? Has it changed? How is it now?
12. For any foods or dishes that you prepare differently here than you did in Liberia, what is the reason for preparing the foods or dishes differently?
13. On a normal day, can you tell me what foods you eat now?
14. Do you like Ghanaian foods? Which Ghanaian foods do you eat?
15. How does getting food in Ghana differ from when you were in Liberia?
16. If you were in Liberia, what foods would you feed to your children/grandchildren?
17. Is it different from what you feed to them here?
18. Are there some foods you feel are good for your health and the health of your family? (foods that help you not to be sick)
19. If so, what are they and why do you feel they are good foods?
20. Are there some foods you think are not good for your health and the health of your family? (foods that might make you or your family to be sick)
21. If so, what are they and why do you feel they are not good foods for the health?
22. Do you feel food is healthier in Ghana or Liberia? Why?
23. Do you think younger people now eat differently from the way you ate in your youth? If so, how?
24. In the past 6 months, have you changed the way you eat? If so, why and how?
25. How do you think the way Liberians eat differs from the way Ghanaians eat?

**Table 2: In-Depth Interview Questions: Liberian refugees born in Ghana**

1. Do you eat Liberian foods/dishes? How often?
2. What are the most common Liberian dishes that you eat?
3. Do you like Ghanaian foods? Which Ghanaian foods do you eat?
4. On a normal day, can you tell me what foods do you normally eat?
5. What foods do you feed to your children?
6. Are the foods that you give to your children different of what you or other adults eat in your home?
7. Are there some foods you feel are good for your health and the health of your family? (foods that help you not to be sick)
8. If so, what are they and why do you feel they are good foods?
9. Are there some foods you think are not good for your health and the health of your family? (foods that might make you or your family to be sick)
10. If so, what are they and why do you feel they are not good foods for the health?
11. In the past 6 months, have you changed the way you eat in any way? If so, why and how?

### **Table 3: In-Depth Interview Questions: Ghanaians**

1. On a normal day, can you tell me what foods do you normally eat?
2. How do you get food? (farming, buying, some give it to them, etc)
3. What foods do you feed to your children/grandchildren? Are the foods that you give to your children different of what you or other adults eat in you home?
4. Are there any foods you eat now that you didn't use to eat before the Liberians arrived in Buduburam? If so, which foods are those? Do you eat some Liberian food?
5. Are there some foods you feel are good for your health and the health of your family? (foods that help you not to be sick)
6. If so, what are they and why do you feel they are good foods?
7. Are there some foods you think are not good for your health and the health of your family? (foods that might make you or your family to be sick)
8. If so, what are they and why do you feel they are not good foods for the health?
9. *(for adults and elderly people only)* Do you think younger people eat differently from the way you ate in your youth? If so, how?
10. In the past 6 months, have you changed the way you eat? If so, why and how?
11. How do you think the way Ghanaians eat differs from the way Liberians eat?
12. Are there other cultural differences that you see between Ghanaians and Liberians?

#### **Table 4: Cultural Beliefs**

(To be read in all interviews at the end)

Do you believe that any of the following statements are true? (Interviewer, please read each option and check all that apply)

- Oranges give malaria
  - Plums (Mangos) gives malaria
  - Palm oil gives malaria
  - Too much sun gives malaria
  - Pineapple gives thrush to children
  - Fish gives worms to children
  - Meats give worms to children
  - If rice is given to children before they start walking it won't make them grow well
  - If you give eggs to your child it will cause that child to steal
  - Eddoes (Cocoyams) give blood
  - Rice is very heavy for small children
  - Bissa (Sobolo) gives blood
  - Plums (Mango) gives diarrhea/runny stomach
  - Bananas give diarrhea/runny stomach
  - Oranges give diarrhea/runny stomach
  - Giving pepper to your baby will make him strong
  - Drinking too much of water will make you fat
  - Vitamins make children eat (i.e. stimulates their appetite)
  - Fresh groundnuts increases production of breast milk
  - If you take ice water when you are pregnant, your baby will be big
  - If you take potato leaves during pregnancy when you don't have blood, it will give you blood
- Are there other beliefs about food that you could think of?
- 
- 

The last questions to ask pertain to the food frequency questionnaire. Please each interviewee:

1. What they think the following sentences mean (read one at a time and probe)
2. Whether it is applicable to them and their community
  - a) Was your home unable to eat the kind of foods that make you healthy at any time during the last 6 months because there wasn't enough food or money to buy food?
  - b) Did you or anybody in your home usually have to eat the same foods almost every day during the last 6 months because there wasn't enough food or money to buy food?
  - c) During the last 6 months was there any day when you or any other adult in your home felt hungry but did not eat because there wasn't enough food or money to buy food?

**Table 6: Domains, Themes, Subthemes and Exemplary Quotations**

<b>Domain/Theme</b>	<b>Exemplary Quotation, Liberian</b>	<b>Exemplary Quotation, Ghanaian</b>
<b>National Identity (proxy for culture)</b>	<p><i>Our major food at home the whole world knows that it's the rice. (grandmother)</i></p> <p><i>The Ghanaians can't eat rice, but we love to eat rice in our own. When you give me gari or banku, I will I swallow it but even if my gut is full, I will still eat rice. (mother)</i></p> <p><i>Ghanaians...they are eating their banku, kenkey... But we Liberians...we want rice and [Liberian] fufu and GB [Liberian gumboy] ...that's the one we can eat. (grandmother)</i></p>	<p><i>Kitteley is for the Liberians, we have not, we have not been eating kitteley. It's not our meal; it's for the Liberians, so I don't eat kitteley. (mother)</i></p> <p><i>We don't buy them [Liberian foods] because they are not our traditional meals. Yes, I know they sell cassava leaves and potato leaves and people buy to eat. Some other people buy to eat, but for us, we really don't like it. We don't like it at all. It's not our culture, it's not our tradition, it's not part of us. (mother)</i></p> <p><i>The Liberian foods is most often rice, rice, rice. So they don't like to eat fufu, they don't like to eat, it's always rice and, and changing the sauce. (grandmother)</i></p> <p><i>They [Liberians] eat the sweet potato leaves, but we don't eat it, it is not part of [our] past so we do not eat sweet potato leaves. (grandmother)</i></p>
<b>Cultural Exchanges</b>	<p><i>I really don't know [if there are any differences between the way Ghanaians eat and the way Liberians eat] because I don't really associate with the Ghanaians too much and I rarely see them eat. (mother)</i></p> <p><i>Really I can't tell you much about the Ghanaians way of eating because since I came here, I haven't really been close to any of them [Ghanaians] and they are not close to me. Even my church that I am in, I don't really see Ghanaians in there. So I don't have really [a] close person that's</i></p>	<p><i>Before the arrival...people were not so much used to eat, but now so many people are eating it [traditional Liberian foods]. (grandmother)</i></p> <p><i>We cook rice once in a week. The formal way of cooking rice throughout because my brothers like rice more than the banku. (grandmother)</i></p> <p><i>I have a Liberian friend...Once in a while we'll visit each other. She's this woman here. She's, the woman here is a Liberian, she's my friend and we sell all, we all sell here in the</i></p>

	<p><i>Ghanaian, uh huh. I don't really know. (grandmother)</i></p> <p><i>We eat it [Ghanaian food], when the people [Ghanaians] share the corn we eat it, sometimes we don't want to eat it so we sell it and buy rice. (grandmother)</i></p>	<p><i>market... We share foods together. Most often it's rice that she, it's often rice that she shares with me. (mother)</i></p> <p><i>They [Liberians] were our counterpart [from the Seventh Day Adventist church] on the refugee camp, [those] Liberians [in the] refugee camp do not also eat [fish with] scales and so I could eat with them and they could also eat with me because um we share common values, our religious values. (grandmother)</i></p> <p><i>Because I don't go to the refugee camp, I don't interact with them [Liberians]. They can not influence me in any thing. The way I was trained is the way I'm living. So they haven't influenced me in any way. I haven't interacted with them apart from going to buy from their market and coming back. I do not have any Liberian friends, I do not, I do not interact with them so it would be difficult for them to influence me. (grandmother)</i></p>
<p><b>Food Preferences</b></p>		<p><i>We eat other foods of the Liberians like the cassava leaves, the eggplant leaves and the others. What happens is that my children always eat from our side so they buy all those foods from our side, but it's not like that in the house, it's not like that in the house. Umm it's my children who have been eating the Liberian foods more, much more than anybody else. Much more than anybody in the household. So they are able to buy and eat, but for us, it's the potato leaves that we like so much in the house. (grandmother)</i></p>

		<p><i>[Liberian food is] not something we have eating before and it's just because he went to school and he's eating from there which would change our meal plan... We think it's bad food. (mother)</i></p> <p><i>The children can buy them [Liberian food] at school to eat, but um we, we do not like it, it's not part of us, we're not used to [eating it], it's very difficult for us, just eat what we have not been eating. Our children have always been saying it's very nice and that we should eat, but we haven't eaten... We cannot just begin eating what we don't know. (grandmother)</i></p> <p><i>It's [Liberian food is] not our main meal. We just started eating it because of the arrival of the refugees so we, we began planting it. Even now, it's not so many people are eating it so there's not too much attention to the production of it. I hear also that the Ashanti eat it a lot, but we the Fanti, we don't eat it. It's just by chance that the Liberians came here and we started eating it. (mother)</i></p>
<p><b>Food Preparation</b></p>	<p><i>Their way [the Ghanaian way] of preparing the food is different, our way of we preparing the food is different. (granddaughter)</i></p> <p><i>The Ghanaians food...it is corn that they can prepare their food with, most of their food are corn; and the Liberian people that's rice they love, you know. (granddaughter)</i></p>	
<p><b>Texture</b></p>	<p><i>For the Liberians if they fix it, we get, we get good taste like the pepper will be there, the salt, the chicken soup, all will be on same level, but for the Ghanaians if</i></p>	<p><i>I think the difference is that the Ghanaian palm nut soup is light and the Liberian palm nut soup is very thick. Why because our palm soup we use it for banku or fufu or</i></p>



	<p><i>they fix it, they'll leave out, there will be no pepper [meaning there isn't much pepper added], it will not be nice and sweet. (mother)</i></p>	<p><i>something else, but with them their palm soup is eaten with rice so they make it very, very thick to look like a sauce to be eaten with rice. (grandmother)</i></p> <p><i>I think Liberians cook [with] a lot of pepper and so their food is always having lots and lots of pepper and that is why I am not able to consume so that is it. (grandmother)</i></p>
<b>Knowledge</b>	<p><i>It's not used to us the banku, the kenkey, we don't know how to prepare it. (grandmother)</i></p> <p><i>Where we are living, there is so [many] Ghanaians, we are living among Ghanaians. They can cook it and then we can see it. So from there ourselves we started practicing how to cook corn and how to mix it with food. (grandmother)</i></p> <p><i>I have my [Ghanaian] friends...She teach me how to cook all the food and I cook all your [Ghanaian] food. (mother)</i></p> <p><i>Everybody [knows] how to eat the Ghana food because we stay here now. (mother)</i></p>	<p><i>We don't know how to cook, how to use it to cook and we, we don't know how to eat it [traditional Liberian foods]. (mother)</i></p> <p><i>Because we have never eaten cassava leaves, so we can't eat it, we don't know how to eat it. (grandmother)</i></p>
<b>Food Availability</b>		<p><i>There are lots of farms, lots of koko farms and on the koko farm you can have cassava and corn and other things. So there we are able to eat throughout the year and even with our new harvest we'll make the old foods we harvested. So, so we, we don't have food problems there. Sometimes our problem even is conservation, but not availability. (mother)</i></p> <p><i>The only difference is how much I was feeding at those times and how</i></p>

		<i>much I am eating now. (grandmother)</i>
<b>Garden</b>	<p><i>My mom was farming when I was small. My father too, it was tradition. (mother)</i></p> <p><i>Other people [Liberians] making gardens. Up to this time, I am not making garden, but they are still making garden. (grandmother)</i></p> <p><i>We got the woman of destiny there [at a non-profit organization] doing some farming and one week from now we'll harvest our palava sauce and it's what we are doing there. So I do it also back home. I plant these small, small things, pepper, cassava, bitter ball, those things for harvesting. (grandmother)</i></p> <p><i>I don't make garden in Liberia. In Liberia, I don't make garden and I don't make farm, but here I came and I made garden. (grandmother)</i></p>	<p><i>We farm the potato, we farm the, the cassava and we have the leaves of the potato and we have the leaves of the cassava. (grandmother)</i></p>
<b>Quality of Land</b>	<p><i>If you have your backyard garden [in Liberia] you don't need to buy those things, but here, the soil here, if you dig now, it's a very big rock under here that when you plant anything, it will not come out, it will not germinate. ...In Liberia the soil that we have there is different from here. So most of the food we want to eat here is not here. The people are able to plant it even where I've found most of those foods here, it was in Kumasi. (grandmother)</i></p>	<p><i>Because of the way people are fetching soil to deal, to dig, to dig, dig; dig the land to get soil to, to construct buildings. The land now is not fertile to, to, to, to grow crops. So I am not farming now. (grandmother)</i></p> <p><i>The cocoyam doesn't do well here on this land. So only grow um, cassava and corn. (grandmother)</i></p> <p><i>This town, this town, plantain doesn't, doesn't grow, cocoyam doesn't grow well, coconut is not there, koko is not here. So conditions here are very tough so we are not able to get a variety of food. The only foods that grow well here are</i></p>

		<i>cassava and corn and so therefore, we only eat cassava and corn all the time. (mother)</i>
<b>Land Availability/ Ownership</b>	<i>The man took the land, the Ghana man took the land and said it is for him. He took the place and said we should move from...He came and he said the place is for him. (grandmother)</i>	<i>I was growing foodstuffs like cassava, groundnut and corn, plantain, sweet potato. Um but I have stopped farming now because uh I don't have a plot now. (grandmother)</i>  <i>Now where we are staying...we cannot farm, the hills are plots to farm. So the only way we get food is to buy. All, all the plots that we we're using to farm, people have used to, to build houses. So now we don't have places to farm. (grandmother)</i>
<b>Market</b>		<i>We farm corn, and...cassava. So we use our farm products, the corn and the cassava until they are finished and then we will be buying from Kasoa Market and the Buduburam Market. (grandmother)</i>  <i>Sometimes, when the house [food] gets finished, we used to buy some at the market. (granddaughter)</i>  <i>Fortunately for us when the money was running out, then the new products, our new farm, we harvested our new farm products. So we were able to uhh, uh, so we didn't run so much out of food or to stop eating. (grandmother)</i>
<b>Food Access</b>		
<b>Cultural Access</b>	<i>All the food is here. (granddaughter)</i>  <i>If I want to cook dry meat or I want to cook fresh meat I can't get it. If I want to cook any good fish like tuna fish, the snapper, lets say the cassava fish with rice, I can't get it here. (mother)</i>	<i>Before the arrival of the Liberian refugees, the kind of foods we were selling were quite different from now. For instance, we were not selling kittedey. Um but, during, when they came in, we're selling lots and lots of kittedey. We're not selling cassava leaves, we're not selling potato leaves and then after their arrival we began selling all those ones. Especially when they, they,</i>

		<p><i>especially when they arrived there were so many and we were selling all these ones, but now they have left, they have left so we stopped selling. Unless there were people who could send to the refugee camp to sell. So understand we had some of them staying um in Awutu and some could even travel to Awutu Market to buy things. (grandmother)</i></p> <p><i>With the cassava leaves and the potato leaves, you know the Ghanaians don't eat them so they [Liberians] were going to the Ghanaian farms to pay their farm owners for um cassava leaves or potato leaves. So they [Liberians] will come to and bring the leaves to the market and then to sell. (mother)</i></p>
<b>Physical Access</b>		<p><i>We walk from the village and walk to the camp because our road is no good, the vehicles do not want to plow our street. So the only thing we have to do to get access to the market is to walk. (grandmother)</i></p>
<b>Economic Access</b>	<p><i>Maybe they [young people] want to eat fruit, like orange, pineapple, but we don't have [money to afford] it. (mother)</i></p> <p><i>It's [fruit is] here, but it's expensive. In Liberia it's not that expensive or Cote d'Ivoire... You can find them [fruit], but you can't find them [fruit as] much as compared to our home. (grandmother)</i></p> <p><i>When we used to cook in Liberia the food was all over, but here you will miss your cooking, because everything here is expensive. (mother)</i></p> <p><i>If you are eating the rice you</i></p>	<p><i>There are some times where me and my daughter will eat rice water. But because the price of rice has gone up, we don't eat [rice] at all. My daughter like rice so much that it was the only food she was eating, but now things are very expensive. The rice is very expensive so we, we do scarcely eat it. (mother)</i></p> <p><i>From my household we were marketing from, we were buying our foodstuffs from Kasoa Market because it was relatively cheaper and you could find all you wanted there and also I was buying them from Kasoa Market to bring back to my house to sell. (grandmother)</i></p>

	<p><i>could prepare it the way you want it if you have money. (mother)</i></p> <p><i>Sometimes, I don't have money I eat rice, dry rice... You cook the rice and then you put, the, the red oil, no soup. (mother)</i></p> <p><i>Sometime if you don't have money, you will cook the rice but maybe in the soup there would be not enough meat inside, but then when you have money, then you cook it. (mother)</i></p> <p><i>If I don't have cassava and no fufu at all, I just manage it and I would buy rice. I will buy three cups, and you can cook it and we eat it dry. (grandmother)</i></p>	
<b>Food Insecurity</b>	<p><i>When my money is small you buy small food you will eat for short time. When the money is plenty you will buy plenty and you will eat for long time. (grandmother)</i></p> <p><i>Sometimes you don't have money [to purchase healthy food]. (mother)</i></p> <p><i>There is nothing to the house, no food, no money. (grandmother)</i></p> <p><i>Sometimes we find [food], and it can be [meager], sometimes we find it we eat, but if we don't find it, we don't eat. (grandmother)</i></p> <p><i>For us, any food we can get we will eat. The issue is that we do not have food, so any food we have available we will eat. (grandmother)</i></p>	<p><i>We experienced one, one moment like that when our food got finished and the money [we] had to buy, we used to buy food [and it] also got finished and we didn't have charcoal to sell to make money. (mother)</i></p> <p><i>There hasn't been any changes at all in the way we eat our foods. We are able to eat maybe three times in a day and sometimes as we want to. (grandmother)</i></p> <p><i>I eat two meals in a day. It's not, it's not because em, it's not because I'm food insecure, it's because I don't have the appetite to eat. (mother)</i></p>
<b>Coping Strategies</b>	<p><i>When I don't eat rice to me that's sacrifice. (mother)</i></p>	

<p><b>Reducing Variety of Food</b></p>	<p><i>You want to eat [a] certain thing, but you don't have the money so you eat one thing over and over again. (mother)</i></p>	<p><i>The kind of food we prepare in the morning is the same food we eat in the afternoon and is the same food that we eat in the evening. For instance if we prepare banku in the morning, some is left for the afternoon. (mother)</i></p> <p><i>We don't have that money to buy food and to come and keep [it] and not eat it or be changing variety. It is better we buy the kokonte and keep eating it till it's finished and then we eat another one and buy some, some other food to eat. (mother)</i></p>
<p><b>Substituting More Economical Food</b></p>	<p><i>I will buy cassava because I know the rice... if the money is not sufficient for rice...rice is dear, cassava is cheaper, so I that's cassava I will buy and be managing it small small, because the money is not there. (grandmother)</i></p> <p><i>Sometimes I'd be hungry in the night and the children bring kenkey "self" and we eat it oh. Sometimes I don't eat the whole day and they are selling it right here. Somebody help me with 2,000, I buy kenkey. (grandmother)</i></p>	<p><i>[The food she purchased] depends on the circumstances and how much finance we have at that particular moment. If you have enough money you buy, you buy corn to prepare banku. But if, if you do not have enough funds to buy, you buy kokonte. (mother)</i></p> <p><i>You look at how much quantity of, how much money of you have, the quantity of food you need and then you make a decision. So most often we buy kokonte, which lasts longer than the corn. (mother)</i></p> <p><i>The best we can do is to buy the kokonte so that it will last longer for the family. We will be able to feed it, feed our need for a longer period as compared to, eh the corn. (grandmother)</i></p>
<p><b>Reducing Quantity of Food or Meal Frequency</b></p>	<p><i>We eat only one time. We don't eat in the morning, afternoon, [and] evening. (mother)</i></p> <p><i>The changes I have made are that the food, the food that I was used to eat, now everything expensive so we, we cut the food down... We used to eat two times a day when</i></p>	<p><i>We cut down the quantity of food and the meals, the frequency of meals we eat. (mother)</i></p> <p><i>We have had occasions where the adults have to eat only once in a day. But um, well we manage, for once, we always have once, we've never had a situation where somebody will</i></p>

	<p><i>we had money. So we eat one time now. (mother)</i></p>	<p><i>not eat throughout the whole day, we haven't experienced that. If we do not have, I mean we will not eat the breakfast, we will not eat the lunch, but for supper, we must eat supper. So no matter what we do, no matter what the food is, if we do not have food at all, we will reserve the food that we have available for evening. So whatever be the case, every adult must have supper. (grandmother)</i></p>
<p><b>Buffering Children from Food Insecurity</b></p>	<p><i>If I have it [breakfast and supper], I give it [to the baby], but if I don't have it she will drink water. (mother)</i></p> <p><i>When I [am] ready to cook small part now, I share to everybody, and they eat, but as we don't get it I will not [be able to even] give it to the baby. (mother)</i></p>	<p><i>I reduced the quantity of seven to the children, but not the adults. I reduced the quantity for the children because the children didn't have to complain. They don't, the children will not complain and take only what they have been served. But for the adults they will complain a lot and so I have to serve the adults more than the children. So the normal food that the children were eating was, was reduced over the 6 months, but em the normal food, em but the food that the adults were eating was not reduced, it was the same quantity they were eating...the children will definitely eat their three square meals in a day. If you do, it's reduced, they eat in the morning, they reduce quantity and eat in the afternoon, they reduce quantity and eat in the evening and they reduce quantity. But for the adults, they will skip a meal and they will eat twice in a day. (grandmother)</i></p> <p><i>It's only the adults that we reduce the quantity and the number of food we eat and depending on the situation if we have very less food to eat, we eat one meal a day which we will be eating in the night. But em, for the children we don't, we don't reduce the quantity or frequency of meals they take in a day. Sometimes</i></p>

		<p><i>also the one meal that we could eat, we could divide like the supper into two and then take half of the supper and then for the morning we take for breakfast. So that we will be able to have the next day's supper, we divide the next day's supper also into two. So in the long run, the food that we eat, our meal in the evening could be divided into two and take half that evening and half the next morning.</i> (mother)</p>
<b>Social Support</b>		
<b>Spiritual Support</b>	<p><i>We [were] eating...for the last six months God was providing it.</i> (mother)</p> <p><i>It's just by the grace of god, it's just, we were getting food to eat for those process... I never can remember them because we have just...I never, I have not got rations since I came here.</i> (mother)</p>	<p><i>It is god who is taking care of us, so generally when all our food is finished we get money also to buy.</i> (mother)</p> <p><i>Because I serve food, I always had food. Um my grandchildren never stopped, never stopped my grandchildren of food. God always provided for us so it was fine.</i> (grandmother)</p>
<b>Government and Non-Government Support</b>	<p><i>I plea[d] because I [am] a refugee now.</i> (grandmother)</p> <p><i>I'm a widow. I do not have a husband. They say when we go there [to Buduburam] we'll do some baking and also at other times I will give her pieces of bread and give us something for us to wash our clothes. So she was able to bring, to come here and when she came, she asked [a non-governmental organization] to help me. And since then, [that organization] have not been doing nothing. And I am just here with my children, you can look here.</i> (grandmother)</p>	<p><i>I see the Liberians are really enjoying. Looking at how they live [it] is better than we do here in the village. Liberians receive corn and other foods that the government is giving them. But we, we don't receive anything. For instance, they [the government] give them rice [Mother is told Liberians receive corn, not rice]. Ok, even if it is corn... if we were also given corn, we would make very good use of it.</i> (mother)</p>
<b>Family Support</b>	<p><i>It is difficult for those of us who don't have anybody to send you something to eat for the food that you are supposed to eat. Like</i></p>	<p><i>When my husband was alive, every month he gave me money for the housekeeping and then I could even use those monies to help in my trade</i></p>



	<p><i>today, we ate yam. (grandmother)</i></p> <p><i>Sometimes back in Liberia, my husband was a forester and he worked in the forest. So really for me, we never had problem with meat. (mother)</i></p> <p><i>My husband was a sitting mayor. And we had a farm; we had people there that hunted for us. Like mostly in Liberia and in Grand Gedeh County where I come from, plenty of meat. We got plenty meat. We sit out here and get ours, we can see the people hunt and bring meat for me. I had my hunter that bring meat. Then the fish, we had a fish farm at the backyard of the house. (mother)</i></p>	<p><i>and then the product that came, I used that to cook in the house. But now it is very difficult to get food because we have to rely on this small trading I have and am doing...times are difficult more than when my husband was around. (grandmother)</i></p>
<b>Food Beliefs</b>		
<b>Rice</b>	<p><i>Some [young] children, if you give them the rice, they can't walk soon. (grandmother)</i></p> <p><i>You can give your baby rice, but not plenty rice, not the rest that you yourself you eat. Maybe you can cook small and you make it soft, not make it hard like the one big person can eat and you feed the child small, small, small, small, but the rice shouldn't be plenty for the child, small and soft. (mother)</i></p>	<p><i>Rice is very good when, especially for small children when you make it softer you add well-prepared stew to it and then feed the children it will make them grow well. (mother)</i></p>
<b>Pepper</b>	<p><i>They [Liberians] pepper the child...They put it in the nose...and they put it in the buttocks...It goes straight to the brain...They make the brain hot...It can make baby strong. (mother)</i></p> <p><i>Yea...everybody believes that [pepper will make a child grow up</i></p>	<p><i>I think is with the Liberians. Ghanaians I think don't do that, but I have seen Liberians here on camp do that to make their children strong. (grandmother)</i></p> <p><i>That is not true [about pepper helping a child grow up strong]. That used to be an old perception. People used to believe, but that is not too good. (mother)</i></p>

	<i>strong]. (mother)</i>	
<b>Nutrition Knowledge</b>		
<b>From Healthcare Providers</b>	<i>They [people at the clinic] told me that I should, to get more blood I should eat food that will give blood like potato greens, the palm nut soup, the beans and that I should also drink bissa with low sugar in it. (mother)</i>	<i>All the starchy, starchy foods when I'm, when I'm sick they ask me not to eat them because they don't promote good health. (grandmother)</i>
<b>Nutritional Value of Foods</b>	<p><i>Food is nothing, but food. It's good for your body. (grandmother)</i></p> <p><i>Right now I don't even know what they will [need] eat to be healthy. I don't know. (grandmother)</i></p> <p><i>The potato greens is healthy food, the cassava leaves is healthy food, so all the rest of the food, all depends the way you prepare it, the way in which you prepare it and the ingredients that you put in it. They are all healthy food. (mother)</i></p>	<p><i>There are some foods that you eat which will give you strength, some foods that you eat that wouldn't give you strength. (grandmother)</i></p> <p><i>I think some of the foods that people eat and will not be healthy are for instance like banku. Some people don't like to eat um banku so they wouldn't eat kenkey. And some people do not like to eat, to mix the corn dough with the cassava dough to prepare the banku because like it's not healthy. (grandmother)</i></p> <p><i>Foods like beans, beans is very good and they can promote your growth. Beans, beans, and my people locally always call it asedua. (grandmother)</i></p> <p><i>It's because of the way it's prepared. For instance, the kernels, the kernel, the husk of the kernel is taken off making it very, very light. People eat it and there's no new strength gain from it and they don't develop, they don't have strength. (grandmother)</i></p> <p><i>It's quite difficult to tell which food will not make you grow well, which will not make you grow well, it doesn't. Like for instance if you consider banku, banku is good. I think all the foods are good depending on how you eat them.</i></p>

		(mother)
<b>Healthy Food is What is Available</b>	<i>When the family eats, they will be very healthy. (grandmother)</i>	<p><i>I don't know what is good food and what is bad food. All we eat is what we have to eat. We, to be honest, we, we don't really have food ever since our life we have eaten these kinds of food, so we believe that these are the foods that will make us healthy. (mother)</i></p> <p><i>The things we eat we do not know if they are healthy or not. When serving our foods, we eat one kind of food and that is what makes us survive so we believe they are healthy foods. Like the cassava and the corn, the kontomire and tomato soup and the pepper, palmtree soup and groundnut soup. (mother)</i></p> <p><i>All foods are foods, all foods we consume what we have. (mother)</i></p>