

Detailed Technical Report

Objective

The overarching objective of the survey was to assess the food security of the ethnically diverse population of older adults in New York City and identify barriers. The overarching objective of the analysis is to reflect on barriers and identify potential solutions to address findings, with specific consideration given to the nutrition assistance programs most directly impacting the older adult population, such as the Elderly Nutrition Program (ENP), which provides congregate and home-delivered meals and the Food Stamp Program (FSP).

Key Findings

Food Security is defined as access by all people at all times to enough nutritious food for an active, healthy life. The primary focus of the U.S. Department of Agriculture's nutrition assistance programs is providing food security.¹ The primary goal of the *2007 Food Security Survey of Older Adults in New York City* was to conduct a food security survey of ethnically diverse older adults, in the five (5) boroughs. Responsibilities included identification, development, administration of the survey tool and data collections and analysis. A secondary goal was to identify potential solutions to address findings. Research was done that determined the food security status of older adults, and their perceptions of access to food and food stamps. This report is the summary from the survey and analyzes data collected against city, state and national demographics, ethnicity and gender of participants in 15 communities. Communities targeted sought to include Whites, Blacks, Hispanics, Chinese and Russians, with the latter three administered in language appropriate surveys. Both the Chinese and Russian translations were developed for this study.

It is important to keep in mind that as a result of insufficient food, food insecurity can lead to a variety of nutrition-related issues and chronic diseases, including hunger, malnutrition, and physical impairments. Food insecurity is also associated with poor diabetes and chronic disease management, depression, HIV infection, and overall poor health status. For adults 65 years and older, research has specifically shown a correlation between food insufficiency and dietary intakes below 50% of the recommended daily allowances for calcium, protein, vitamin A, vitamin B6, phosphorous, thiamin, riboflavin, and niacin.¹ Since older adults already have higher rates of chronic health conditions, nutrient-deficiency diseases, impaired gastrointestinal function, and increased susceptibility to infection, poor dietary intake as a result of food insecurity can further increase the risk of malnutrition, underweight status, disability, hospitalization, and early mortality.²

The 10 Question USDA Household Food Security Survey was used along with some additional data collection related to age, living situation, ethnicity, and food stamps. The study sample included a

¹ Holben DH. Position of the American Dietetic Association: food insecurity and hunger in the United States. *J Am Diet Assoc.* 2006;106:446-458.

² Food Security Institute. Hunger and food insecurity among the elderly. February, 2003. Available at: <http://www.centeronhunger.org/pdf/Elderly.pdf>. Accessed April 16, 2007.

total of 802ⁱⁱ respondents covering five boroughs with respondents distributed fairly evenly among four of the five:

➤ Bronx	191	(24%)
➤ Brooklyn	220	(27%)
➤ Manhattan	196	(24 %)
➤ Queens	153	(19%)
➤ Staten Island	36	(5%)
➤ Unknown	5	(1%)

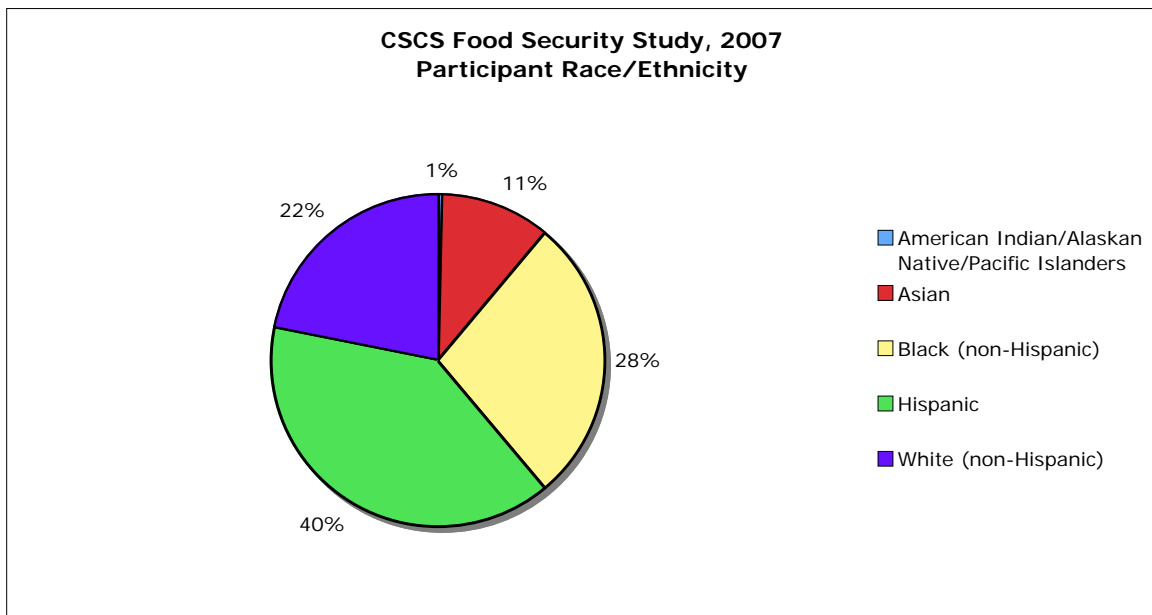
Locations

Due to weather and limited time to arrange site access, the majority of data collection was done at senior centers (441/55%); on Sidewalks (17%) at food pantries (107/13%) and an assortment of other locations (117/15%):

Race/Ethnicity

In addition to seeking representation across the boroughs an effort was made to be sure the communities selected reflected diversity in race and ethnicity. The surveyed populations with regard to race included predominantly Hispanic (318/40%), Black/non-Hispanic (221/28%) and White (173/22%), with Asian predominantly Chinese (86/11%).

Figure 1



The survey was administered in four languages with in English (467/56%) and in Spanish (240/30%) being dominant. As a targeted population the Asian population was dominated by Chinese based on the use of a Chinese survey tool (70/9%). A Russian survey (35/3%) was administered in parts of Brooklyn.

Food Security Outcomes

280 (35%) of the respondents were determined to be food insecure, with an almost even distribution between food insecure with out hunger (139/17%) and food insecure with hunger (141/18%). Food security existed for 522 (74%) with 408 (60%) maintaining high food security and 114 (14%) marginal.

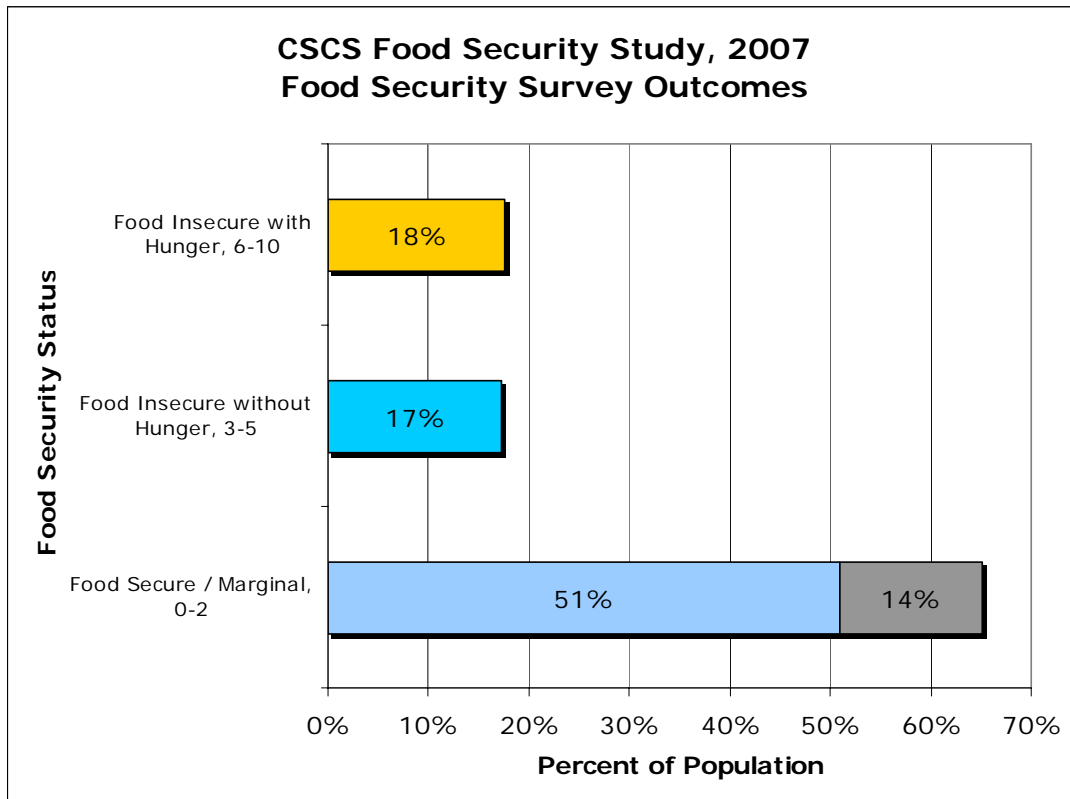
Table 1

CSCS Food Security Study, 2007 Food Security Survey Outcomes

Food Security Status	Score Range	Participants	Response Rate
High Food Security	0	408	51%
Marginal Food Security	1-2	114	14%
Food Insecure without Hunger	3-5	139	17%
Food Insecure with Hunger	6-10	141	18%

n=802

Figure 2



Higher rates of food insecurity were noted in the study sample as compared to national rates where food insecurity totals 6% of all US households with elderly for 2005.ⁱⁱⁱ (Table 2) However, our data may be unusually high given that the sites were dominated by locations where those who are food insecure likely congregate (senior centers for congregate meals, food pantries and soup kitchens). Still, it is important to note that even with accessing these services the needs of this population are still not being met. The standard one meal per weekday at a congregate feeding program or from Meals-on-Wheels does not resolve the problem. Increasing access to meals, the number of meals, and bagged options at senior centers, along with increased support for food stamp outreach, are important considerations.

Table 2

National Food Security rates, 2005 Compared to CSCS Food Security Study, 2007

	Food Security (high + marginal)	All Food Insecurity	Food Insecurity Without Hunger	Food Insecurity With Hunger
US Households with elderly (2005)*	94%	6%	4%	2%
CSCS Households with elderly (2007)	65%	35%	17%	18%

*Source: Nord et al, 2005.

The Relationship between Food Security, Nutrition and Chronic Disease

It is important to keep in mind that as a result of insufficient food, food insecurity can lead to a variety of nutrition-related issues and chronic diseases, including hunger, malnutrition, and physical impairments. Food insecurity is also associated with poor diabetes and chronic disease management, depression, HIV infection, and overall poor health status. For adults 65 years and older, research has specifically shown a correlation between food insufficiency and dietary intakes below 50% of the recommended daily allowances for calcium, protein, vitamin A, vitamin B6, phosphorous, thiamin, riboflavin, and niacin.³ Since older adults already have higher rates of chronic health conditions, nutrient-deficiency diseases, impaired gastrointestinal function, and increased susceptibility to infection, poor dietary intake as a result of food insecurity can further increase the risk of malnutrition, underweight status, disability, hospitalization, and early mortality.⁴

Age Groupings

The majority of those surveyed provided their year of birth, however in order to cover maximum outreach and accommodate privacy, an option was offered allowing for age categorization between 60 and 64 years old or 65 years or older. The choice of 60 as the starting point was important for data analysis as food stamp eligibility for older adults begins at 60 years old, and elderly census data is based on an age of 65 or older. Thus, within the 60 to 74 year old group, we further

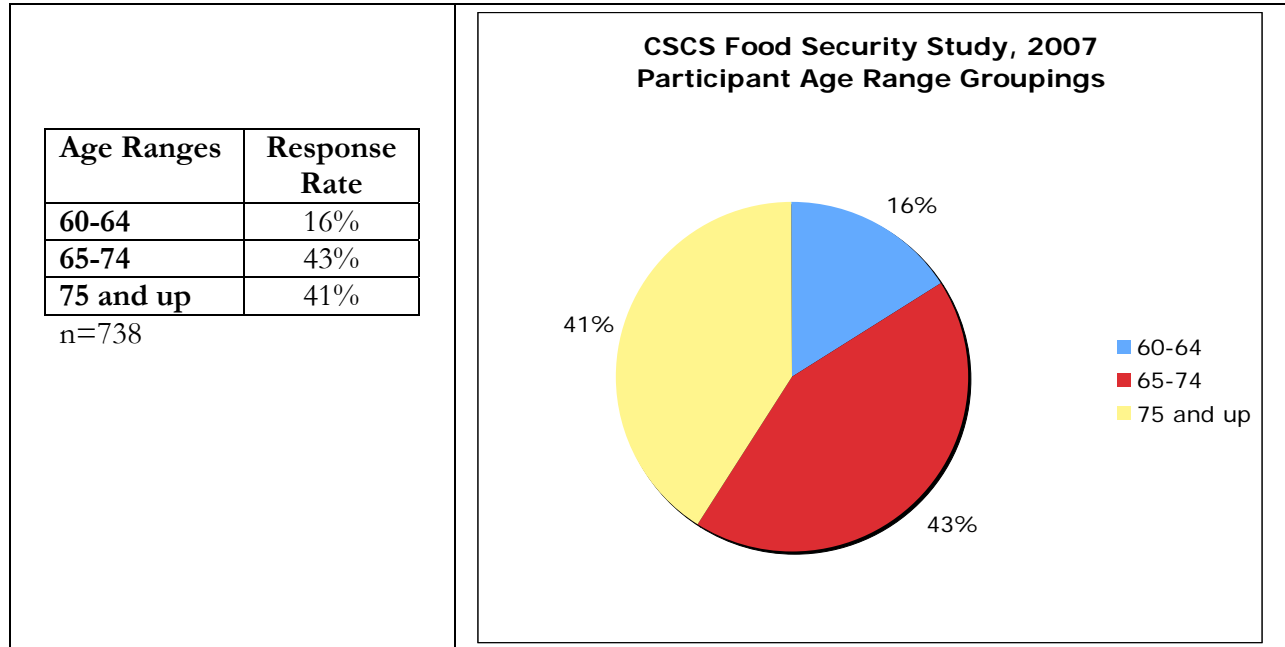
³ Holben DH. Position of the American Dietetic Association: food insecurity and hunger in the United States. *J Am Diet Assoc.* 2006;106:446-458.

⁴ Food Security Institute. Hunger and food insecurity among the elderly. February, 2003. Available at: <http://www.centeronhunger.org/pdf/Elderly.pdf>. Accessed April 16, 2007.

categorized into intervals of 60 to 64 years and 65 to 74 years. Ages ranged from 58 to 94 years. The median (midpoint) age of the sample was 73 years. Since this median is close to the cut-off age of 74 commonly used by national statistical reporting, respondents were categorized into groupings based on intervals of 60 to 64 (120/16%), 65-74 (314/43%) years and 75 years and older (304/41%).

Table 3 Figure 3

Age Range Groupings



Survey analysis by age revealed that this population became more food secure with age and that the 60-64 age range had the greatest level of food insecurity both with and without hunger (64 of 120/53%/).

- The younger interval reflected a more dramatic level of food insecurity than the 65-74 (111 of 314/39% o) and 75 plus intervals (75 of 304/25%).
- Food Security with hunger represented one in three of the 60-64 population, one-five of the 65-74 population and one-in-ten of the 75 plus population.

Table 4

CSCS Food Security Study, 2007 Levels of Reported Food Security by Age Group

Level of Food Security	60-64	65-74	75+
Food Secure	33%	46%	63%
Marginally Food Secure	14%	16%	13%
Food Insecure without Hunger	20%	18%	15%
Food Insecure with Hunger	33%	21%	10%

n=738

This finding was surprising. Data on food stamps reflects a higher participation level for those greater than 65 at the City, State and national levels (Table 5) and it does bring forward the question as to why the 60-64 population is not accessing benefits at a higher level.

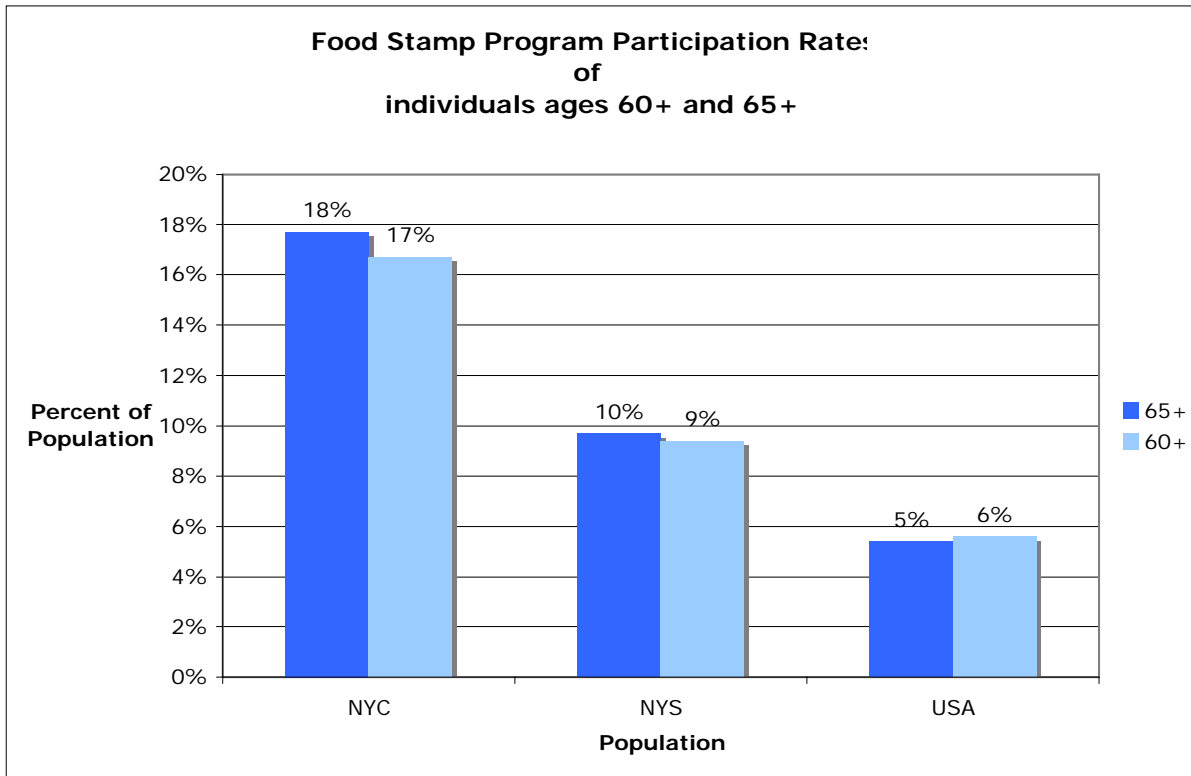
Table 5

Food Stamp Program Participation Data by Population and Age Group

Population & Age	2005 FSP Participation Rate
NYC-total	13%
NYC-65+	18%
NYC-60+	17%
NYS-total	9%
NYS-65+	10%
NYS-60+	9%
USA-total	8%
USA-65+	5%
USA-60+	6%

*Source: U.S. Census Bureau, Census 2000 and U.S. Census Bureau, 2005 American Community Survey

Figure 4



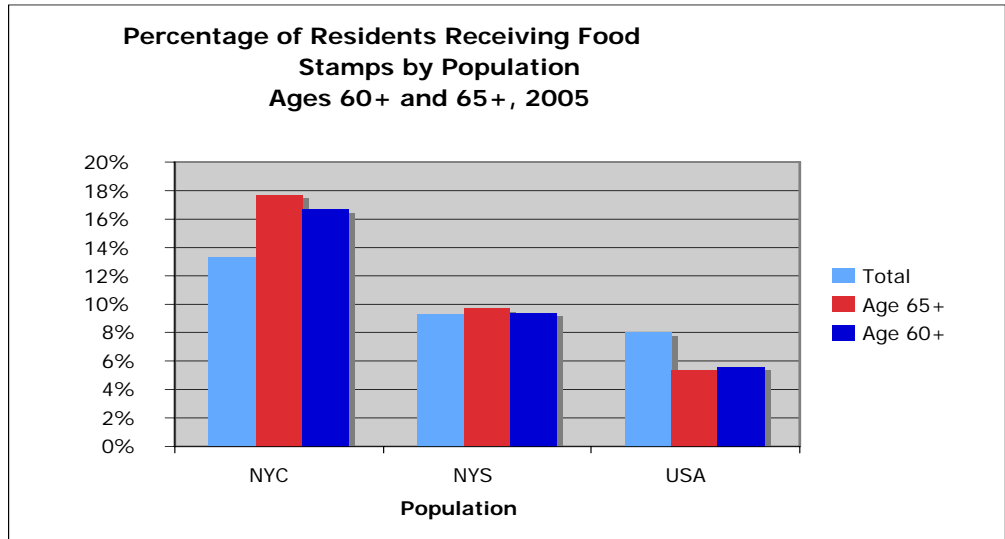
*Source: U.S. Census Bureau, Census 2000 and U.S. Census Bureau, 2005 American Community Survey

This is not consistent with national poverty data, which reflects the 75+ category being the most food insecure. Access to the frailer older adult population may have been impacted by weather, as the assessment took place mostly during the month of February, and those who are the frailest may be less likely to leave their homes at this time of year.

It is important to note that food insecurity is also an indicator of poor nutritional outcomes, as adults from food insecure homes have less healthful diets.^{iv}

It is recognized that the 60-64 age group does tend to receive less food stamp benefits than other older adults (65-74 and >74yo) which further supports additional outreach specifically to this population.

Figure 5



*Source: U.S. Census Bureau, 2005 American Community Survey

Table 6

Percentage of Residents Receiving Food Stamps by Population and Ages 60+ and 65+, 2005

Population	Total	Age 65+	Age 60+
NYC	13%	18%	17%
NYS	9%	10%	9%
USA	8%	5%	6%

*Source: U.S. Census Bureau, 2005 American Community Survey

Older Adults Living Alone

Research indicates that older adults who live alone are at greater risk for food insecurity. In the United States, 11% of all households experienced food insecurity in 2005. Of the households with elderly persons, 6% were food insecure at some point in 2005.^v In addition, households with elderly living alone had a slightly higher prevalence of food insecurity than all households with elderly persons.

Of the 495 older adults living alone 196 were Hispanic with 82/42% experiencing food insecurity and 54/28% experiencing it with hunger.

- The 142 participants who were Black had 50/35% living alone that experienced food insecurity and 23/16% experienced it with hunger.
- Of the 34 Asians who lived alone and participated in the survey one-in-three (11/32%) had food insecurity without hunger.

Table 7

CSCS Food Security Study, 2007: Older Adults Living Alone

Population n=495	Household Composition	Food Secure	All Food Insecure	Food Insecure Without Hunger	Food Insecure With Hunger
CSCS Food Security Study, 2007	Households with Elderly Living Alone	50%	36%	17%	19%
United States, 2005*	Households with Elderly Living Alone	94%	6%	4%	2%

*Source: Nord et al, 2005.

Gender

There was relatively no difference in food security status by gender as evidenced by the percent of females who were food insecure being similar to males (174/34% and 106/37% respectively).

Table 8

CSCS Food Security Study, 2007 Levels of Reported Food Security by Gender

Level of Food Security	Female	Male
Food Secure	50%	52%
Marginally Food Secure	16%	12%
Food Insecure without Hunger	18%	17%
Food Insecure with Hunger	17%	19%

n=802

The majority of respondents were female (506/63%), with males making up (294/37%) of the total sample (two were not coded).

Race/Ethnicity

When asked to define their race/ethnicity, 318/40% responded as Hispanic, 221/28% as Black non-Hispanic, 173/22% as White non-Hispanic, 86/11% as Asian, and 4/ 0.5% as American Indian/Alaskan Native/Pacific Islander. Proportionately Whites and Asians tended to have a higher representation of older adults who fell into the 75+ category and Hispanics and Blacks showed a higher representation of the 60-64 age range. This may be a factor in addressing the high food insecurity of this age interval.

Figure 6

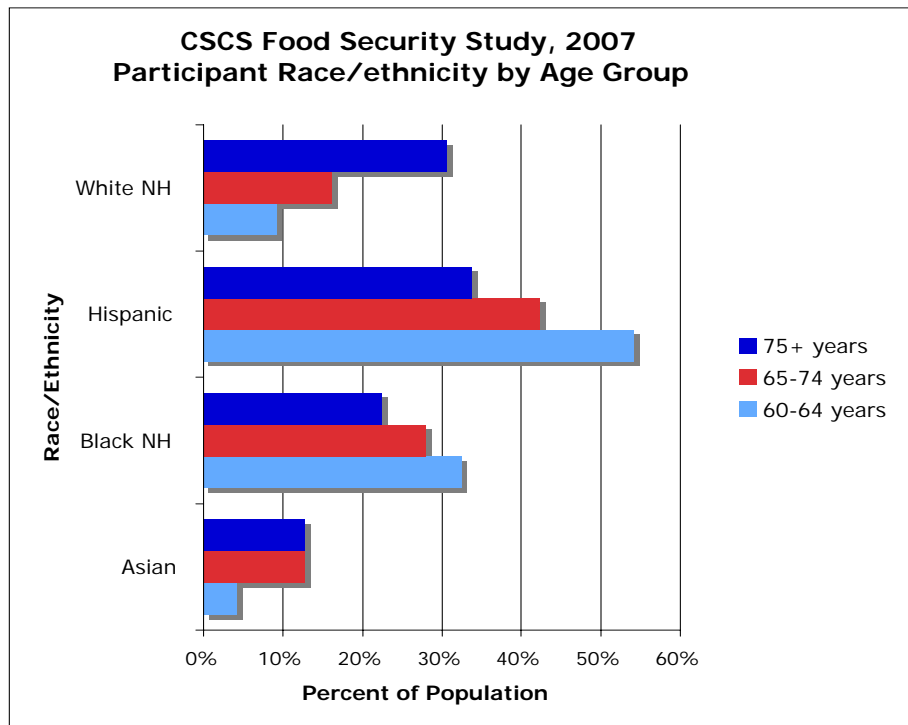


Table 9

CSCS Food Security Study 2007, Participant Race/ Ethnicity by Age Group

Race/ethnicity	60-64 years	65-74 years	75+ years
Asian	4%	13%	13%
Black NH	33%	28%	22%
Hispanic	54%	42%	34%
White NH	9%	16%	31%

n=738

Location

Of the 441 respondents from senior centers 129/30% were food insecure. This was split evenly between those with and without hunger. This indicates that one-in-three older adults participating in senior centers is experiencing some level of food insecurity, with 15% experiencing it with hunger

Table 10

CSCS Food Security Study 2007, by Location

Level of Food Security	Food Pantry	Senior Center	Sidewalk	Other
Food Secure	37%	58%	48%	41%

Marginally Food Secure	16%	13%	17%	14%
Food Insecure without Hunger	30%	15%	15%	17%
Food Insecure with Hunger	18%	15%	20%	18%

n=802

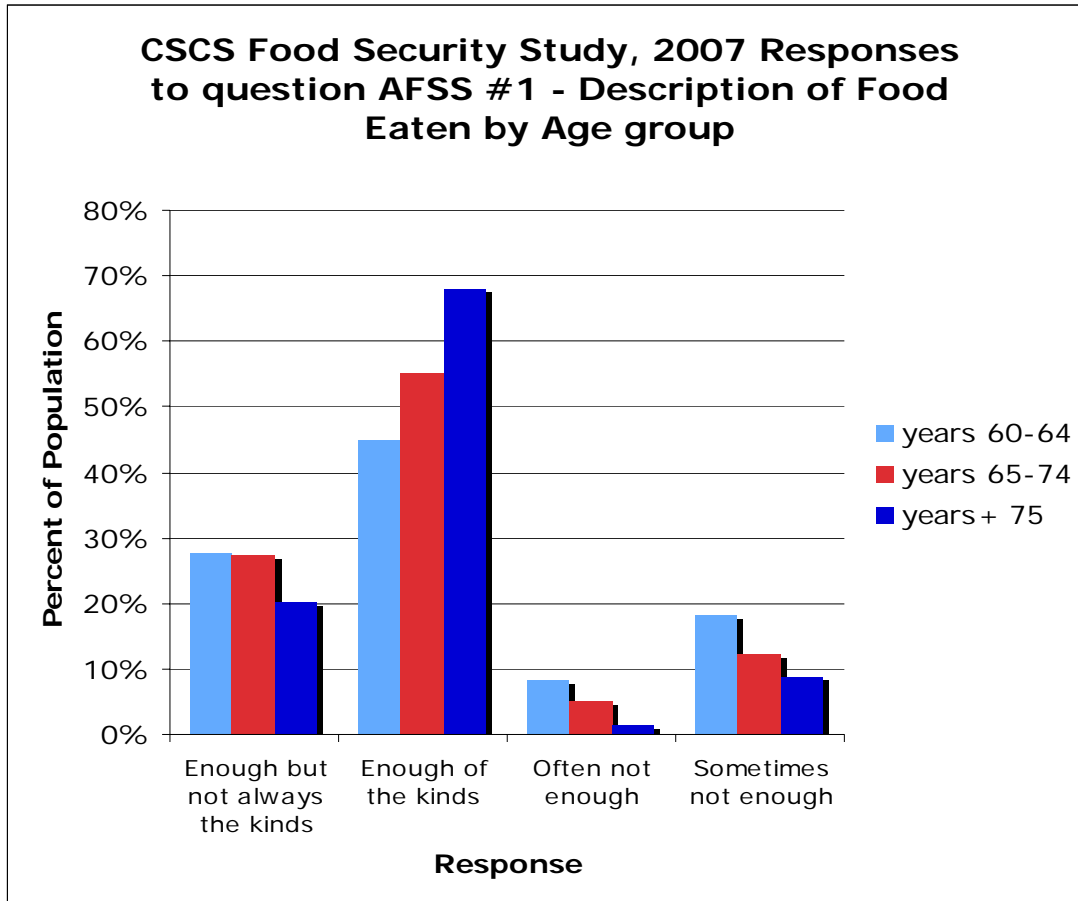
Survey Question Analysis

All questions asked from the AFSS were based on the respondent's recall of the previous 12 months. Of the entire sample, 126/16% reported that they sometimes or often did not have enough to eat.

As noted, responses did not vary significantly by gender, however ethnic differences were seen. The first question of the AFSS asked for a description of the food eaten in the last 12 months (Figure 7).

- Hispanics, Blacks and Asians were more likely than Whites to report sometimes not having enough to eat (45/14%; 27/12%; 10/12% and 11/6%, respectively);
- Whites were more likely to have enough of the kinds of food desired (132/76%) than Hispanics (166/52%), Blacks (114/52%), and Asians (57/66%)
- Both Blacks and Hispanics were more likely to report having enough, but not always the kinds of foods desired (70/32% and 94/39% respectively) than Asians (13/15%) and Whites (19/11%)

Figure 7



Analysis of the second question revealed that 316/39% sometimes or often worried whether their food would run out before they got money to buy more. Again, no gender differences were found, however responses varied by ethnicity.

- A higher percentage of Blacks (73/33%) and Hispanics (102/32%) reported sometimes worrying whether their food would run out before they got money to buy more as compared to Whites (29/17%).
- Whites were more likely than Hispanics and Blacks to report never worrying about food running out before getting money to buy more (125/72%, 181/57%, and 120/54%, respectively).

The 60-64 year olds were the most likely to answer that they sometimes (53/44.2%) or often (19/15.8%) worried whether food would run out before they got money to buy more food. Together, this represents 72/60% of the entire sample.

While the situation is not as grave among the older age groups it is still serious with 136/43% of 65-74 year olds and 85/28% of 75+ year olds showing evidence of concern that food would run out before getting money to buy more .

The second question of the AFSS asked if they were their worried food would run out before they got money to buy more over the last 12 months.

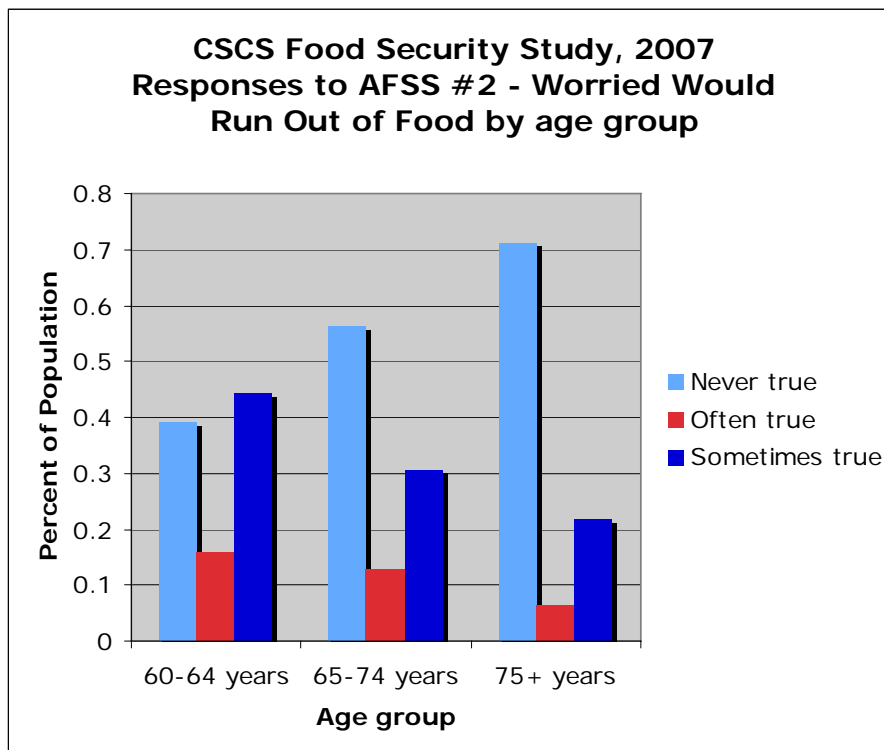
Table 11

CSCS Food Security Study, 2007 Responses to AFSS question #2 by age group

Response	60-64 Years	(+/- ME)	65-74 Years	(+/- ME)	75+ Years	(+/-ME)
Never true	39%	9	56%	6	71%	5
Often true	16%	7	13%	4	6%	3
Sometimes true	44%	9	31%	5	22%	5
Concern Evident	60%	3	33%	3	28%	3

n-802

Figure 8



Of the total sample, 319/40% noted that the food they bought sometimes or often didn't last and they didn't have money to get more, and 304/38% reported that they sometimes or often could not afford to eat balanced meals.

Only those respondents who answered affirmatively to at least one of the above questions were prompted to continue to the next section of the survey. Thus, the following results do not include respondents who were determined to have high food security based on the initial screening questions. A total of 405 respondents (51%) continued on to the next set of questions. Of this group, 174/43% reported that either they or other adults in their household cut the size of their meals or skipped meals because there wasn't enough money for food.

- Of those who answered affirmatively to this question, 69/40% did so almost every month; 78/45% did so during some months, but not every month; and 24/14% did so only 1 or 2 months.

Other questions in the AFSS survey determined:

- 182/45% ate less than they felt they should because there wasn't enough money to buy food;
- 118/29% were hungry but didn't eat because there wasn't enough money for food;
- 85/21% lost weight because there wasn't enough money for food.

Out of the 405 respondents who answered these questions, 275 (68%) fell into at least one of the categories mentioned above. These 275 respondents were prompted to continue on to the last question, of which 55/20% reported that either they or other adults in their household went a whole day without eating because there wasn't enough money for food. Of those who answered affirmatively to this question 16/30% did so almost every month; 27/51% did so during some months, but not every month; and 10/19% did so only 1 or 2 months.

All 802 respondents were asked whether they or someone in their household participates in the Food Stamp Program, to which 309/39% responded affirmatively:

- 258/32% reported that they personally participated
- 26/3% reported that they and another family member participated
- 25/3% reported that someone in their family participated

Those that responded affirmatively were asked to report the dollar amount of food stamp benefits received. Answers ranged from \$10 to \$913 per month and were impacted by the size of the household, which was not determined, with the exception of those who lived alone.

Of those who lived alone the maximum monthly food stamp allotment is \$155.^{vi} In order to obtain an estimate of the number of older adults receiving the maximum benefit, we analyzed the data based on those who reported living alone and receiving monthly benefits of \$155 or less. A total of 179 of the 276 respondents (65%) fell into this category. Only 5% of those who lived alone received the maximum benefit, 25% receiving \$150 or more per month. In addition, 65% reported a monthly benefit of \$100 or more.

- A benefit of \$20 or less was reported by 15% of respondents and 10/4% of this group received \$10 in monthly Food Stamp benefits

Out of the total sample, 490/61% reported that neither they nor someone in their household participated in the Food Stamp Program. When asked to give a reason for not participating, the most common responses included:

- "Do not think the household is eligible" (227/46%)
- "Denied benefits in the past" (53/11%)
- "Benefits are too low" (34/7%).

A. Limitations

Challenges to the site outreach included: disconnected or wrong phone numbers, only open certain days/times, language barrier, the person in charge was not available, the site did not serve a large percentage of seniors, the site no longer provided the services for which it was originally chosen (i.e. food pantries or soup kitchens that no longer provided food), and sites who would only participate if a service was provided in return. As a result of the increased availability, high senior population, and overall willingness to participate, the majority of surveys were completed at senior centers, food pantries, and at outdoor locations. Other location categories were visited, however they were not as accessible and/or did not have as large of an older adult population, and thus fewer surveys were administered at these sites.

Table

Location Category
Senior Center
Sidewalk
Food Pantry
Soup Kitchen
Bus Station (outside)
Subway Station (outside)
Church
Food Stamp Office (outside)
Social Service Agency
Salvation Army
Fast Food Establishment
Shopping Center

Significant differences between Asians and other ethnic groups were not seen for most responses to questions in the AFSS, however this does not mean that Asians in NYC experience the same rates of food insecurity as blacks, Hispanics, and/or whites. Rather, these results are most likely due to the relatively small number of Asian respondents. While a Russian survey was administered the sample size in this instance did not make it viable for analysis.

F. Methodology

Community Selection

Since the aim of this study was to document hunger among the elderly in New York City, outreach and assessment took place in all five boroughs (Bronx, Brooklyn, Manhattan, Queens, and Staten Island). Target communities within each borough were chosen based on data regarding

hunger/food insecurity, ethnicity (Hispanic, Chinese, Russian, and Caucasian), and policy. Table 12 lists the target communities in each borough. Ethnic demographics were obtained from the NYC Department of City Planning. Table 12 includes the ethnic breakdown of each community by NYC Community Board.

Table 12

Borough	Target Community
Bronx	City Island
	East Tremont
	Fordham
	South Bronx
	Throgs Neck
Brooklyn	Bedford-Stuyvesant
	Brighton Beach
	Bushwick
	Coney Island
	East New York
	Sunset Park
Manhattan	Chinatown
	East Harlem
	Lower East Side
	Washington Heights
Queens	Corona
	Jamaica
	Sunnyside
Staten Island	St. George

The communities chosen for this survey tended to be areas of high poverty and poorer health. Over one-quarter of the residents in Hunts Point and Mott Haven (South Bronx), Bushwick, East Harlem, East New York, Fordham, Washington Heights, and Sunset Park live in poverty.⁵ These same communities are ranked amongst the highest in NYC for the percentage of adults who consider their health to be “fair” or “poor.”⁶

⁵ New York City Department of Health and Mental Hygiene. Demographics statistic set. Available at: <http://www.nyc.gov/html/doh/html/stats/stats-demo.shtml>.

⁶ New York City Department of Health and Mental Hygiene. Health status statistic set. Available at: http://www.nyc.gov/html/doh/html/stats/stats-h_status.shtml.

Demography by Community

Analysis of the ethnic breakdown of survey communities was done using by NYC Community Board. Data obtained from the NYC Department City Planning. Community District Profiles. By community board to be sure we would reach the target ethnic demographics (Caucasian, Hispanic, Chinese and Russian). The Russian community was added midway during the study as a result of access to a Russian interviewer. While discussed during initial meetings as a need a concern that we would not be able to do proper outreach deferred the site selection. Based on the Russian surveyor availability both Brighton Beach and Coney Island were added as these are known for high concentrations of the Russian Community.

Table 13 next page

					2000 Census Demographics (by Community Board)							
Borough	Community	City Council Representative	City Council District	Community Board #	Total Pop	White NH	Black/ African American NH	Asian or Pacific Islander NH	American Indian and Alaska Native NH	Some Other Race NH	NH of Two or More Races	Hispanic Origin
Bronx	Throgs Neck/ City Island	James Vacca	13	10 (Throgs Neck, Pelham Bay, Co-op City, Westchester Sq, City Island)	115,948	56,063	22,754	3,462	164	525	2,172	30,808
						48.4%	19.6%	3.0%	0.1%	0.5%	1.9%	26.6%
Bronx	East Tremont/ Fordham	Joel Rivera	15	5 (Morris Hts, University Hts, Fordham, Mt. Hope)	128,313	1,917	41,609	2,071	453	978	2,237	79,048
						1.5%	32.4%	1.6%	0.4%	0.8%	1.7%	61.6%
				7 (Kingsbridge Hts, Bedford Park, Fordham, University Hts)	141,411	15,164	28,277	9,114	383	1,080	3,643	83,750
						10.7%	20.0%	6.4%	0.3%	0.8%	2.6%	59.2%
				6 (East Tremont, Bathgate, Belmont, West Farms)	75,688	7,021	19,694	891	201	238	1,252	46,391
						9.3%	26.0%	1.2%	0.3%	0.3%	1.7%	61.3%

					2000 Census Demographics (by Community Board)							
Borough	Community	City Council Representative	City Council District	Community Board #	Total Pop	White NH	Black/ African American NH	Asian or Pacific Islander NH	American Indian and Alaska Native NH	Some Other Race NH	NH of Two or More Races	Hispanic Origin
Bronx	South Bronx	Maria del Carmen Arroyo	17	1 (Mott Haven, Port Morris, Melrose)	82,159	1,097	21,272	420	206	186	774	58,204
						1.3%	25.9%	0.5%	0.3%	0.2%	0.9%	70.8%
				2 (Hunts Point, Longwood)	46,824	582	10,021	207	101	90	316	35,507
						1.2%	21.4%	0.4%	0.2%	0.2%	0.7%	75.8%
Brooklyn	Bedford-Stuyvesant	Albert Vann	36	3 (Bedford-Stuyvesant, Tompkins Park N, Stuyvesant Hts)	143,867	2,056	110,431	1,457	432	473	2,998	26,020
						1.4%	76.8%	1.0%	0.3%	0.3%	2.1%	18.1%
Brooklyn	Coney Island/Brighton Beach	Domenic Recchia	47	13 (Coney Island, Brighton Beach, Gravesend, Homecrest, Seagate)	106,120	58,684	16,654	10,079	191	304	2,955	17,253
						55.3%	15.7%	9.5%	0.2%	0.3%	2.8%	16.3%
Brooklyn	East New York/Bushwick	Erik Martin Dilan	37	5 (East New York, New Lots, City Line, Starrett City)	173,198	8,785	84,838	6,007	733	2,251	5,272	65,312
						5.1%	49.0%	3.5%	0.4%	1.3%	3.0%	37.7%

					2000 Census Demographics (by Community Board)							
Borough	Community	City Council Representative	City Council District	Community Board #	Total Pop	White NH	Black/ African American NH	Asian or Pacific Islander NH	American Indian and Alaska Native NH	Some Other Race NH	NH of Two or More Races	Hispanic Origin
				4 (Bushwick)	104,358	3,026	24,838	3,245	300	787	2,020	70,142
						2.9%	23.8%	3.1%	0.3%	0.8%	1.9%	67.2%
Brooklyn	Sunset Park	Sara Gonzalez	38	7 (Sunset Park, Windsor Terrace)	120,063	27,369	4,203	20,911	258	668	3,322	63,332
						22.8%	3.5%	17.4%	0.2%	0.6%	2.8%	52.7%
Manhattan	Lower East Side/ Chinatown	Rosie Mendez	2	3 (Lower East Side, Chinatown, Two Bridges)	164,407	46,396	11,633	57,871	240	597	3,475	44,195
						28.2%	7.1%	35.2%	0.1%	0.4%	2.1%	26.9%
Manhattan	Washington Heights	Robert Jackson	7	12 (Washington Heights, Inwood)	208,414	28,242	17,480	4,310	505	727	2,736	154,414
						13.6%	8.4%	2.1%	0.2%	0.3%	1.3%	74.1%
Manhattan	East Harlem	Melissa Mark Viverito	8	11 (East Harlem)	117,743	8,565	42,062	3,185	240	384	1,964	61,343
						7.3%	35.7%	2.7%	0.2%	0.3%	1.7%	52.1%
Queens	Corona	Hiram Monserrate	21	3 (Jackson Hts, East Elmhurst, North Corona)	169,083	25,351	17,765	22,861	355	1,024	4,545	97,182
						15.0%	10.5%	13.5%	0.2%	0.6%	2.7%	57.5%

					2000 Census Demographics (by Community Board)							
Borough	Community	City Council Representative	City Council District	Community Board #	Total Pop	White NH	Black/ African American NH	Asian or Pacific Islander NH	American Indian and Alaska Native NH	Some Other Race NH	NH of Two or More Races	Hispanic Origin
				4 (Elmhurst, Corona)	167,005	17,540	11,465	49,656	386	821	4,099	83,038
						10.5%	6.9%	29.7%	0.2%	0.5%	2.5%	49.7%
Queens	Sunnyside	Eric Gioia	26	2 (Sunnyside, Woodside)	109,920	33,877	2,158	29,380	184	550	3,732	40,039
						30.8%	2.0%	26.7%	0.2%	0.5%	3.4%	36.4%
Queens	Jamaica	Leroy Comrie, Jr	27	12 (Jamaica, South Jamaica, Hollis, St. Albans)	223,602	4,837	161,530	11,009	1,059	4,273	10,166	30,728
						2.2%	72.2%	4.9%	0.5%	1.9%	4.5%	13.7%
Staten Island	St. George	Michael McMahon	49	1 (North Island- includes St. George)	162,609	81,264	35,189	8,546	351	480	4,587	32,192
						50.0%	21.6%	5.3%	0.2%	0.3%	2.8%	19.8%

Table 13. Ethnic breakdown of survey communities by NYC Community Board. Data obtained from the NYC Department City Planning. Community District Profiles. Available at: www.nyc.gov/html/dcp/html/lucds/cdstart.shtml.

The communities chosen for this survey tended to be areas of high poverty and poorer health. Over one-quarter of the residents in Hunts Point and Mott Haven (South Bronx), Bushwick, East Harlem, East New York, Fordham, Washington Heights, and Sunset Park live in poverty.⁷ These same communities are ranked amongst the highest in NYC for the percentage of adults who consider their health to be “fair” or “poor.”⁸

Site Selection

The Directors of CSCS-affiliated senior centers in each community were contacted for their ideas and advice on potential survey sites. These sites included organizations, institutions, or community buildings where older adults were likely to visit, such as local food pantries, soup kitchens, senior centers, shopping centers, religious institutions, fast food restaurants, Off Track Betting storefronts, public libraries, and housing projects. Internet searches were used to identify additional locations, such as social security offices, immigration offices, food stamp offices, and social service organizations. Major public transportation stops or hubs were also sought within each community.

Once identified, each site was contacted for permission to survey older adults at the location. Sites within each community that agreed to participate varied in their days and hours of operation. Since each community would only be visited once (or twice for large communities like Jamaica and the South Bronx), some sites were excluded due to their lack of availability on the chosen day. At least five different location categories were identified in each community, and the interviewers were given the choice of which locations to visit in order to increase efficiency. Interviewers were also encouraged to survey older adults on the sidewalk several feet away from public libraries, governmental buildings, bus stops, and subway stations in order to provide a more random sample.

Due to the lack of identified sites in City Island, the community was excluded from this study.

Initial Location Selection was determined to be:

Table 14

Location Category
Adult Day Care
Outside a Bus Station
Church
Fast Food Establishment
Food Pantry
Food Stamp Office
Housing Project
Homeless Shelter
OTB
Public Library

⁷ New York City Department of Health and Mental Hygiene. Demographics statistic set. Available at: <http://www.nyc.gov/html/doh/html/stats/stats-demo.shtml>.

⁸ New York City Department of Health and Mental Hygiene. Health status statistic set. Available at: http://www.nyc.gov/html/doh/html/stats/stats-h_status.shtml.

Salvation Army
Senior Center
Soup Kitchen
Outside a Subway Station
Sidewalk
Transportation Vehicle
Other-Specify

Since the study ran from February 9, 2007 to March 2, 2007, winter weather was an issue. It was assumed that on very cold or snowy days, older adults would likely remain indoors. Thus, interviewers were instructed to check <http://www.weatherchannel.com> no earlier than 6pm the evening before they were assigned to work. If the high temperature was above 32F, interviewers were to pick at least three of the five location categories provided to them. If the high temperature was below 32F, interviewers were to pick two of the five location categories that are indoors.

Hunger Hotline Cards

Due to the anonymity, short duration, and limited resources of this study, we were unable to provide in-depth individual assistance to respondents who were identified as food insecure and/or hungry. However, we felt we had an ethical responsibility to refer those who were in need of food to call the New York City Hunger Hotline (866-NYC-FOOD). This 24-hour, toll-free phone service was established by the Food Bank for New York City after September 11, 2001 in response to the heightened need for food and volunteers during the 9/11 crisis. Since then, it has served to help New Yorkers locate a food program in their community where they can receive emergency food assistance.⁹ Interviewers were given business-sized cards with the Hunger Hotline number printed on them, with the instruction to provide a card to any respondent who indicated that they were hungry or in need of food.

Data Analysis of Older Adult Survey

Inferential data were analyzed with the statistical software package SPSS (Version 14, SPSS, Inc., Chicago, IL) with other statistical analysis utilizing Version 9. Inferential analysis margins of error represent the approximate 95% confidence intervals associated with the observed rates, with data assumed to be a representative, random sample taken from the population surveyed. All estimates based upon statistical samples are subject to margin of error. Factors influencing the margin of error include sample size. For most national level percentage estimates, the margin of error is ± 1.5 percentage and for most state and city level data cited percentage estimates, the margin of error is ± 8 percentage points. In some instances, estimates are based upon sub-samples or sample sizes small than the total. In these cases the margin of error is likely to be higher than those previously stated.

64 missing cases (8% of the total of 802) reflect the one respondent (0.1% \pm 0.5) identified as 58 years old, the 10 (1.2% \pm 0.79) unknown cases and the 53 cases (6.6% \pm 1.7) identified only as 65+ years. If defined as 65 or over, actual age is unknown and therefore these respondents were not categorized into any of these groupings.

An exit interview was designed and shared upon completion of the survey of older adults with an option of completing whereupon an additional hour of pay would be provided. Four of the seven interviewers completed the survey and the team leader. This survey was prepared as a

⁹ Food Bank for New York City. 866-NYC-FOOD. Available at: <http://www.foodbanknyc.org/index.cfm?objectid=AB4B838C-3473-0E4E-C057FF96E3CF3996>. Accessed April 17, 2007.

method of gaining knowledge for improvement of future work and to gather insights for potential inclusions and adjustments to future assessment tools.

Appendix

Analysis Appendix

Location Analysis Chart

Table 15

Location Category	Proportion of Surveys Administered (+/- ME)
Senior Center	55.0% (3.52%)
Sidewalk	17.1% (2.69%)
Food Pantry	13.3% (2.44%)
Soup Kitchen	4.5% (1.34%)
Bus Station (outside)	3.1% (1.10%)
Subway Station (outside)	2.7% (1.10%)
Church	1.6% (0.79%)
Food Stamp Office (outside)	1.2% (0.79%)
Social Service Agency	1.2% (0.79%)
Salvation Army	0.5% (+0.46%)
Fast Food Establishment	0.2% (+0.46%)
Shopping Center	0.2% (+0.46%)

Table . Frequency of survey administration by location category (+/- margin of error)

Community Analysis Chart

Table 1 lists the target communities in each borough and percentage of respondents (+/- margin of error) by community.

Table 16

Borough	Target Community	Response Rate (+/- ME)
Bronx 24%	City Island	N/A*
	East Tremont	4.6% (1.54%)
	Fordham	1.1% (0.79%)
	South Bronx	13.5% (2.44%)
	Throgs Neck	4.6% (1.54%)
Brooklyn 27%	Bedford-Stuyvesant	6.1% (1.71%)
	Brighton Beach	1.7% (0.79%)
	Bushwick	5.9% (1.71%)
	Coney Island	5.2% (1.54%)
	East New York	5.5% (1.54%)
	Sunset Park	3.0% (1.10%)
Manhattan 24%	Chinatown	7.2% (1.86%)
	East Harlem	6.6% (1.71%)
	Lower East Side	5.9% (1.71%)
	Washington Heights	4.7% (1.54%)

Queens 19%	Corona	3.2% (1.34%)
	Jamaica	9.4% (2.12%)
	Sunnyside	6.5% (1.71%)
Staten Island 5%	St. George	4.5% (1.54%)

Table Target communities by borough in New York City, with response rates (+/- margin of error) by community (n = 802).

*Community was excluded from study due to lack of survey sites.

Methodology

Older Adult Survey

The FGE Food and Nutrition Team worked with the staff from the Council of Senior Centers to identify what the study was to assess and then identified a valid and reliable survey tool that could be expanded, recognizing that additions would not be tested for reliability or validity do to time and budget constraints. A survey instrument was to be administered in person in one of 4 languages (English, Spanish, Chinese or Russian) and in 15 communities across the 5 boroughs of New York City. 802 surveys were completed over 4 weeks by bi-lingual interviewers trained in use of the 10 Question USDA Food Security Survey with questions added to better assess perceived barriers to food access.

Methods—Questionnaire

The USDA US Adult Food Security Survey¹⁰ (AFSS) was used to determine food insecurity in the study sample. This 10-question survey is an adaptation of the US Household Food Security Survey (HFSS), which includes an additional eight questions specific to children.¹¹ Since the goal of the study was to document hunger among the elderly in New York City, the abbreviated version was used to reduce respondent burden.

Participants were asked to complete the survey verbally, and all interviewers were trained on how to administer the survey according to the directions set forth by the US Adult Food Security Survey module.¹ The optional USDA food sufficiency question was included as an additional screening question.

10 Economic Research Service, United States Department of Agriculture. U.S. Adult Food Security Survey module: three-stage design, with screeners. September, 2006. Available at: <http://www.ers.usda.gov/Briefing/FoodSecurity/surveytools/ad2006.pdf>. Accessed April 16, 2007.

11 Economic Research Service, United States Department of Agriculture. U.S. Household Food Security Survey module: three-stage design, with screeners. 2006. Available at: <http://www.ers.usda.gov/Briefing/FoodSecurity/surveytools/hh2006.pdf>. Accessed April 17, 2007.

Balanced Meals Question

It has been previously documented that the phrase 'balanced meal' (included in Question 4-see Appendix ___) may need additional clarification as it can elicit diverse interpretations from low-income respondents.¹² Gulliford et al¹³, in their study of household food insecurity in Trinidad and Tobago, included the following definition of 'balanced meal' next to the Question 4 response options directly on the HFSS:

A balanced meal may contain starchy food, like rice, potatoes, bread, ground provisions or macaroni; and a protein-rich food like meat, fish, milk, or peas or beans; and a fruit or a vegetable.

Since the survey was self-administered, all respondents were able to view the definition prior to answering the question.

According to Mark Nord of the Economic Research Service of the USDA (written communication, February 2007), the main intent of Question 4 is not to measure whether a person is eating nutritionally-balanced meals, but rather to measure a person's access to what he or she deems as adequate food. Thus, the phrase 'balanced meal' is meant to be self-defined. Based on this discussion, it was decided not to provide additional clarification of 'balanced meal' to respondents. If asked to define 'balanced meal,' interviewers were instructed to respond by saying, "Whatever it means to you."

Additional Questions

Along with the AFSS, additional questions were asked to provide more information about the sample. Prior to the AFSS, respondents were asked for their birth year (to identify age), gender, whether they live alone or with others, and their race/ethnicity based on race categories (Black non-Hispanic, White non-Hispanic, Hispanic, Asian, and American Indian/Alaskan Native/Pacific Islander). Those who were < 60 years old were excluded from participating in the study.

Regardless of their answers to the AFSS questions, all respondents were asked if they or other members of their household participate in the Food Stamp Program (FSP). If so, they were asked to provide the dollar amount they or their household receive in Food Stamp benefits. If they did not participate in the FSP, they were asked to provide the main reason why not from a list of possible reasons, or to provide a reason that was not listed.

In addition, those respondents who continued on to Adult Stage 2 of the AFSS (Questions 5-8) were asked the following open-ended question:

12 Derrickson JP, Sakai M, Anderson J. Interpretations of the "balanced meal" household food security indicator. *J Nut Educ*. 2001;33:155-160.

13 Gulliford MC, Nunes C, Rocke B. The 18 Household Food Security Survey items provide valid food security classifications for adults and children in the Caribbean. *BMC Public Health* [serial online]. 2006;6. Available at: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1459858>. Accessed April 16, 2007.

If you had an opportunity to tell the mayor and city council in one sentence about why it is difficult for you to get food, what would you say?

Answers were recorded by the interviewer in the language they were given, and translated into English by the interviewer at a later time.

Languages

In order to include a variety of ethnic populations in this study, interviewers who could speak English, Spanish, Russian, and/or Chinese were recruited. It was also necessary that the AFSS be translated into each of these languages to improve reliability between interviews. At the time of this study, the AFSS was only available from the USDA in English and Spanish.¹⁴ Thus, Russian and Chinese versions were still needed. Also, all additional questions had been written in English and needed translation into Spanish, Russian, and Chinese.

Due to limited resources, translations from English into Spanish, Russian, and Chinese were performed by affiliates of the Council of Senior Centers and Services. To better ensure that the meaning of the questions was retained, the native-speaking interviewers were then asked to translate the tools back into English. Any discrepancies between the original English document and the back-translation were identified and corrected following the same procedure. Since the Russian and Chinese versions of the AFSS were not tested prior to use, validity and reliability were not determined for these tools.

¹⁴ Harrison GG, Stormer A, Herman, DR, Winham DM. Development of a Spanish-language version of the U.S. Household Food Security Survey module. *J Nutr.* 2003;133:1192-1197. Available at: <http://jn.nutrition.org/cgi/content/full/133/4/1192>. Accessed April 16, 2007.

Literature Search

Balanced Meals

Derrickson JP, Sakai M, Anderson J. Interpretations of the “balanced meal” household food security indicator. *J Nutr Educ*. 2001;33:155-160.

Gulliford MC, Nunes C, Rocke B. The 18 Household Food Security Survey items provide valid food security classifications for adults and children in the Caribbean. *BMC Public Health* [serial online]. 2006;6. Available at:

<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1459858>. Accessed April 16, 2007.

Community Service Society: <http://www.cssny.org/index.html>

Levitan M. Poverty in New York City, 2005: more families working, more working families poor. *Community Service Society Annual Report*. September, 2006. Available at:

<http://www.cssny.org/pdfs/Poverty-in-NYC-2005-FullReport.pdf>. Accessed April 17, 2007.

Community Service Society. Food stamp calculator. Available at:

<http://pbrcmanual.cssny.org/foodstampcal.htm>. Accessed April 17, 2007.

Wenzler D. Food stamps. Available at:

<http://www.cssny.org/pbrc/consumerbenefits/foodstamps.pdf>. Accessed April 17, 2007.

Community Service Society. Food stamps: maximum food stamp allotment. Available at:

<http://www.cssny.org/pbrc/consumerbenefits/foodprograms.pdf>. Accessed April 17, 2007.

CSCS Recommended

Council of Senior Centers and Services of New York City, Inc. Growing old in New York City: the age revolution. February 2006. Available at: http://www.cscs-ny.org/files/policydocuments06/GrowingOld_FEB2006.pdf. Accessed April 16, 2007.

Gusmano MK, Hodgson MG, Tobier E. Old and poor in New York City. *International Longevity Center Issue Brief*. September-October 2002. Available at:

<http://www.ilcusa.org/lib/pdf/b20021121a.pdf>. Accessed April 16, 2007.

ERS

Nord M, Andrews M, Carlson S. Household food security in the United States, 2005. Economic Research Report 29, United States Department of Agriculture, Economic Research Service. 2005. Available at: <http://www.ers.usda.gov/Publications/ERR29/ERR29.pdf>. Accessed April 16, 2007.

Cody S, Ohls J. Evaluation of the USDA elderly nutrition demonstrations: volume 1, evaluation findings. Contractor and Cooperator Report 9-1, United States Department of Agriculture, Economic Research Service. July, 2005. Available at: <http://www.ers.usda.gov/Publications/CCR9-1/ccr9-1.pdf>. Accessed April 16, 2007.

Nord M. Household food security in the United States, 2005. [Audio slideshow]. November 14, 2006. Available at: <http://www.ers.usda.gov/multimedia/>. Accessed April 16, 2007.

Food Bank for NYC Resources

Food Bank for New York City. Anti-hunger policy platform for New York State and City 2007-2012. September 5, 2006. Available at: <http://www.foodbanknyc.org/download.cfm?DownloadFile=09D7E36F-FF43-391F-1C441F3DF2943ADD>. Accessed April 16, 2007.

Food Bank for New York City. Hunger: an aging issue. 2005. Available at: <http://www.foodbanknyc.org/download.cfm?DownloadFile=6ABB2E83-3048-2A6C-8D6DAD85694B32B2>. Accessed April 16, 2007.

Food Bank for New York City. City Harvest. Hunger in America 2006: the New York City and State report. 2006. Available at: <http://www.foodbanknyc.org/download.cfm?DownloadFile=294BF288-3048-2A6C-8D968589B9FE1D0B>. Accessed April 16, 2007.

Food Bank for New York City. Hunger safety net 2004: measuring gaps in food assistance in New York City. 2004. Available at: <http://www.foodbanknyc.org/download.cfm?DownloadFile=DF0B23DE-3048-2A6C-8DBF32BD9E16E7A6>. Accessed April 16, 2007.

Food Bank for New York City. NYC hunger experience. November 2005. Available at: <http://www.foodbanknyc.org/download.cfm?DownloadFile=B379B8AE-3048-2A6C-8D93B16475055A94>. Accessed April 16, 2007.

Food Bank for New York City. NYC hunger view. September 6, 2005. Available at: <http://www.foodbanknyc.org/download.cfm?DownloadFile=31E99466-9E13-E582-5959BE10E48E17D7>. Accessed April 16, 2007.

Food Bank for New York City. Who is hungry? Available at: <http://www.foodbanknyc.org/index.cfm?objectid=46953BFD-C09F-0662-D2750BCEA3F2872A>. Accessed April 16, 2007.

Food Bank for New York City. 866-NYC-FOOD. Available at: <http://www.foodbanknyc.org/index.cfm?objectid=AB4B838C-3473-0E4E-C057FF96E3CF3996>. Accessed April 17, 2007.

Food Security Survey

Harrison GG, Stormer A, Herman, DR, Winham DM. Development of a Spanish-language version of the U.S. Household Food Security Survey module. *J Nutr.* 2003;133:1192-1197. Available at: <http://jn.nutrition.org/cgi/content/full/133/4/1192>. Accessed April 16, 2007.

Bickel G, Nord M, Price C, Hamilton W, Cook J. Guide to measuring household food security. Revised 2000. U.S. Department of Agriculture, Food and Nutrition Service, Alexandria VA. March, 2000. Available at: <http://www.fns.usda.gov/fsec/FILES/FSGuide.pdf>. Accessed April 16, 2007.

Economic Research Service, United States Department of Agriculture. U.S. Adult Food Security Survey module: three-stage design, with screeners. September, 2006. Available at: <http://www.ers.usda.gov/Briefing/FoodSecurity/surveytools/ad2006.pdf>. Accessed April 16, 2007.

Economic Research Service, United States Department of Agriculture. U.S. Household Food Security Survey module: three-stage design, with screeners. 2006. Available at: <http://www.ers.usda.gov/Briefing/FoodSecurity/surveytools/hh2006.pdf>. Accessed April 17, 2007.

Food Review

Guthrie JF, Lin B-H. Older Americans need to make every calorie count. *Food Review.* Summer-Fall, 2002. Available at: http://www.findarticles.com/p/articles/mi_m3765/is_2_25/ai_92914106. Accessed April 16, 2007.

Harris JM, Blisard N. Food spending and the elderly. *Food Review.* Summer-Fall, 2002. Available at: http://www.findarticles.com/p/articles/mi_m3765/is_2_25/ai_92914108. Accessed April 16, 2007.

Nord M. Food security rates are high for elderly households. *Food Review.* Summer-Fall, 2002. Available at: http://www.findarticles.com/p/articles/mi_m3765/is_2_25/ai_92914110#. Accessed April 16, 2007.

Rogers CC. America's older population. *Food Review.* Summer-Fall, 2002. Available at: http://www.findarticles.com/p/articles/mi_m3765/is_2_25/ai_92914103. Accessed April 16, 2007.

The graying of America. *Food Review.* Summer-Fall, 2002. Available at: http://www.findarticles.com/p/articles/mi_m3765/is_2_25/ai_92914100. Accessed April 16, 2007.

Wilde P, Dagata E. Food stamp participation by eligible older Americans remains low. *Food Review.* Summer-Fall, 2002. Available at: http://www.findarticles.com/p/articles/mi_m3765/is_2_25/ai_92914111. Accessed April 16, 2007.

Food Stamps

Gabor V, Williams SS, Bellamy H, Hardison BL. Seniors' views of the Food Stamp Program and ways to improve participation-focus group findings in Washington State. Electronic publication from the Food Assistance and Nutrition Resource Program, E-FAN-02-012. June 2002. Available at: <http://www.ers.usda.gov/publications/efan02012/efan02012.pdf>. Accessed April 16, 2007.

New York State Office of Temporary and Disability Assistance. Food stamp source book. October 17, 2006. Available at: <http://www.otda.state.ny.us/otda/fs/FSSB.pdf>. Accessed April 17, 2007.

Row K. Food security update, older adults: food security and food stamp participation. March 2003. Available at: <http://www.uwex.edu/ces/wnep/files/fdins.pdf>. Accessed April 16, 2007.

United States Department of Agriculture, Office of Analysis, Nutrition, and Evaluation. Making America stronger: a profile of the Food Stamp Program. September 2005. Available at: <http://www.fns.usda.gov/oane/menu/Published/FSP/FILES/Other/FSPProfile.pdf>. Accessed April 16, 2007.

Wilde P, Dagata E. Food stamp participation by eligible older Americans remains low. *Food Review*. Summer-Fall, 2002. Available at: <http://www.ers.usda.gov/publications/FoodReview/Sep2002/frvol25i2e.pdf>. Accessed April 16, 2007.

Cunnyngham KE, Castner LA, Schirm AL. Reaching those in need: state food stamp participation rates in 2004. October, 2006. Available at: <http://www.fns.usda.gov/oane/menu/Published/FSP/FILES/Participation/reaching2004.pdf>. Accessed April 19, 2007.

Cunnyngham KE, Castner LA, Schirm AL. Empirical bayes shrinkage estimates of state food stamp participation rates in 2002-2004 for all eligible people and the working poor: final report. April, 2007. Available at: <http://www.fns.usda.gov/oane/menu/Published/FSP/FILES/Participation/techpartrate2002-2004.pdf>. Accessed April 19, 2007.

Barrett A, Poikolainen A. Food Stamp Program participation rates: 2004. June, 2006. Available at: <http://www.fns.usda.gov/oane/MENU/Published/FSP/FILES/Participation/FSPPart2004.pdf>. Accessed April 19, 2007.

Barrett A. Characteristics of food stamp households: fiscal year 2005. September, 2006. Available at: <http://www.fns.usda.gov/oane/MENU/Published/FSP/FILES/Participation/2005Characteristics.pdf>. Accessed April 19, 2007.

Food and Nutrition Service, United States Department of Agriculture. Food Stamp Program: Fact sheet on resources, income, and benefits. Updated April 4, 2007. Available at: http://www.fns.usda.gov/fsp/applicant_recipients/fs_Res_Ben_Elig.htm. Accessed April 20, 2007.

Roberts C. Food stamp participation in New York State: a snapshot of recent government data. December, 2005. Nutrition Consortium of NYS. Available at: <http://www.hungernys.org/programs/documents/participation-paper.pdf>. Accessed April 23, 2007.

Food and Nutrition Service, United States Department of Agriculture. Food Stamp Program annual summary. Available at: <http://www.fns.usda.gov/pd/fssummar.htm>. Accessed April 24, 2007.

FRAC

Food Research and Action Center. National food insecurity profile, 2005. Available at: <http://www.frac.org/pdf/foodsecprofile2005.pdf>. Accessed April 16, 2007.

Food Research and Action Center. Elderly nutrition program fact sheet. Available at: <http://www.frac.org/pdf/ENPfactsheet.PDF>. Accessed April 16, 2007.

Food Research and Action Center. Food stamp access in urban America: a city-by-city snapshot. October, 2006. Available at: <http://www.frac.org/pdf/cities2006.pdf>. Accessed April 16, 2007.

Food Research and Action Center. State of the States 2006: a profile of food and nutrition programs across the nation. March, 2006. Available at: http://www.frac.org/pdf/2006_SOS_Report.pdf. Accessed April 16, 2007.

Food Research and Action Center. New York. From: State of the States 2006: a profile of food and nutrition programs across the nation. March, 2006:97-98. Available at: http://www.frac.org/pdf/2006_SOS_Report.pdf. Accessed April 16, 2007.

Food Research and Action Center. United States. From: State of the States 2006: a profile of food and nutrition programs across the nation. March, 2006:31-32. Available at: http://www.frac.org/pdf/2006_SOS_Report.pdf. Accessed April 16, 2007.

Food Research and Action Center. Impact of The Food Stamp Reauthorization Act on elderly and disabled individuals. July, 2002. Available at: <http://www.frac.org/html/publications/elderly-reauth.PDF>. Accessed April 16, 2007.

Food Research and Action Center. FRAC's guide to food stamp outreach collaborations. September, 2006. Available at: <http://www.frac.org/pdf/fspguide06/fspguide06.pdf>. Accessed April 16, 2007.

Food Research and Action Center. Hunger in America, and its solutions: basic facts. July, 2004. Available at: <http://www.frac.org/pdf/HungerFacts.pdf>. Accessed April 16, 2007.

Food Research and Action Center. Food Stamp Program rules for the elderly. Available at: <http://www.frac.org/html/news/fsp/fsruleselderly.htm>. Accessed April 16, 2007.

Food Research and Action Center. Fact sheet: the minimum food stamp benefit. Available at: <http://www.frac.org/html/news/fsp/fsminelderly.htm>. Accessed April 16, 2007.

Food Research and Action Center. Fact sheet: food stamps and the elderly. Available at: <http://www.frac.org/html/news/fsp/fsfactselderly.htm>. Accessed April 16, 2007.

Food Research and Action Center. Federal food programs: Food Stamp Program. Available at: http://www.frac.org/html/federal_food_programs/programs/fsp.html. Accessed April 16, 2007.

Food Research and Action Center. Food stamp for the elderly resource center. Available at: <http://www.frac.org/html/news/fsp/fselderlycenter.htm>. Accessed April 16, 2007.

Weil J. Food Research and Action Center. Presentation at USDA National Conversation on the Food Stamp Program. June 22, 2000. Available at: <http://www.frac.org/html/news/fspfractest.html>. Accessed April 28, 2007.

Hunger and Food Insecurity

Holben DH. Position of the American Dietetic Association: food insecurity and hunger in the United States. *J Am Diet Assoc.* 2006;106:446-458. Available at: <http://download.journals.elsevierhealth.com/pdfs/journals/0002-8223/PIIS0002822306000265.pdf>. Accessed April 16, 2007.

Palm Beach County Food Security Project. Summary. October, 2004. Available at: <http://www.trustedpartner.com/docs/library/000027/Food%20Security%20Final%20Report.pdf>. Accessed April 16, 2007. (From Mark Nord: The contact person for detailed information about methodology etc. is Tracey Padian—now Tracey Padian Lamport. The last email I have for Tracey is: traceylamport@adelphia.net)

Aizenman NC. Study warns of hunger among Hispanics. *Washington Post.* December 20, 2006:A04. Available at: <http://www.washingtonpost.com/wp-dyn/content/article/2006/12/19/AR2006121901318.html>. Accessed April 16, 2007.

Food Security Institute. Hunger and food insecurity among the elderly. February, 2003. Available at: <http://www.centeronhunger.org/pdf/Elderly.pdf>. Accessed April 16, 2007.

USDA, Food and Nutrition Service. Food Security. Available at: <http://www.fns.usda.gov/fsec/>. Accessed April 28, 2007.

The United States Conference of Mayors. Sodexho, Inc. Hunger and homelessness survey 2006: a status report on hunger and homelessness in America's cities. December, 2006. Available at: <http://www.usmayors.org/uscm/hungersurvey/2006/report06.pdf>. Accessed April 16, 2007.

New York City Coalition Against Hunger. Hunger hangs on: NYC's food pantries and soup kitchens still overwhelmed despite stock market boom. November, 2006. Available at: www.nyccah.org/releases/report_final.doc. Accessed April 16, 2007.

Metropolitan Council on Jewish Poverty

Grossman DA. Jewish near poverty in New York City. December, 2005. Available at: <http://metcouncil.brinkster.net/index2.html>. Accessed April 17, 2007.

Metropolitan Council on Jewish Poverty. Seniors: meeting the needs of New York's maturing population. August 9, 2000. Available at: <http://metcouncil.brinkster.net/index2.html>. Accessed April 17, 2007.

Ukeles JB, Grossman DA. Report on Jewish poverty. January, 2004. Available at: <http://metcouncil.brinkster.net/index2.html>. Accessed April 17, 2007.

NYC Statistics from NYC.gov

New York City Department of Health and Mental Hygiene. Demographics statistic set. Available at: <http://www.nyc.gov/html/doh/html/stats/stats-demo.shtml>. Accessed April 16, 2007.

New York City Department of Health and Mental Hygiene. Health status statistic set. Available at: http://www.nyc.gov/html/doh/html/stats/stats-h_status.shtml. Accessed April 16, 2007.

New York City Department of City Planning. Community district profiles. Available at: www.nyc.gov/html/dcp/html/lucds/cdstart.shtml. Accessed April 16, 2007.

New York City Department of Health and Mental Hygiene. EpiQuery: NYC interactive health data, Census 2000. Available at: <https://a816-health3ssl.nyc.gov/>. Accessed April 20, 2007.

Older Adults

Administration on Aging. Serving elders at risk: The Older Americans Act Nutrition Programs-national evaluation of the Elderly Nutrition Program, 1993-1995. Available at: http://www.aoa.gov/prof/aoaprogram/nutrition/program_eval/eval_report.asp. Accessed January 19, 2007.

AgingStats.gov. Older Americans update 2006: key indicators of well-being. Available at: http://www.agingstats.gov/agingstatsdotnet/main_site/default.aspx. Accessed April 16, 2007.

Hetzel L, Smith A. The 65 years and older population: 2000. Census 2000 Brief. October, 2001. Available at: <http://www.census.gov/prod/2001pubs/c2kbr01-10.pdf>. Accessed April 20, 2007.

He W, Sengupta M, Velkoff VA, DeBarros KA. 65+ in the United States: 2005. December, 2005. National Institute on Aging. US Census Bureau. Available at: <http://www.census.gov/prod/2006pubs/p23-209.pdf>. Accessed April 24, 2007.

US Census Bureau. American FactFinder. Available at: <http://factfinder.census.gov/home/saff/main.html?lang=en>. Accessed April 24, 2007.

US Census Bureau. Current Population Survey: Household Income 2005. Available at: <http://www.census.gov/cps/>. Accessed April 24, 2007.

US Census Bureau. Current Population Survey: Poverty 2005. Available at: <http://www.census.gov/cps/>. Accessed April 24, 2007.

US Census Bureau. Current Population Survey: Historical Poverty Tables. Available at: <http://www.census.gov/hhes/www/poverty/histpov/hstpov3.html>. Accessed April 26, 2007.

Kuczmarski MF, Weddle DO. Position paper of the American Dietetic Association: nutrition across the spectrum of aging. *J Am Diet Assoc*. 2005;105:616-633.

Urban Institute

Capps R, Ku L, Fix M, Furgiuele C, Passel J, Ramchand R, McNiven S, Perez-Lopez D, Fielder E, Greenwell M, Hays T. How are immigrants faring after welfare reform? Preliminary evidence from Los Angeles and New York City. Final report. March 4, 2002. Available at: http://www.urban.org/Uploadedpdf/410426_final_report.pdf. Accessed April 16, 2007. (Can also access at <http://www.urban.org/publications/410426.html>.)

Other

US Department of Labor, Bureau of Labor Statistics. Consumer Price Indexes. Available at: <http://www.bls.gov/cpi/#data>. Accessed April 26, 2007.

ⁱ USDA Food and Nutrition Service: Food Security. Available at <http://www.fns.usda.gov/fsec/> Accessed April 28, 2007.

ⁱⁱ The base for calculations (n) may vary based on screeners and the use of age intervals. For further explanation refer to methodology.

ⁱⁱⁱ Nord M, Andrews M, Carlson S. Household food security in the United States, 2005. Economic Research Report 29, United States Department of Agriculture, Economic Research Service. 2005. Available at: <http://www.ers.usda.gov/Publications/ERR29/ERR29.pdf>. Accessed April 16, 2007.

^{iv} Holben DH. Position of the American Dietetic Association: food insecurity and hunger in the United States. *J Am Diet Assoc.* 2006;106:446-458. Available at: <http://download.journals.elsevierhealth.com/pdfs/journals/0002-8223/PIIS0002822306000265.pdf>. Accessed April 16, 2007.

^v Nord M, Andrews M, Carlson S. Household food security in the United States, 2005. Economic Research Report 29, United States Department of Agriculture, Economic Research Service. 2005. Available at: <http://www.ers.usda.gov/Publications/ERR29/ERR29.pdf>. Accessed April 16, 2007.

^{vi} Food and Nutrition Service, United States Department of Agriculture. Food Stamp Program: Fact sheet on resources, income, and benefits. Updated April 4, 2007. Available at: http://www.fns.usda.gov/fsp/applicant_recipients/fs_Res_Ben_Elig.htm. Accessed April 20, 2007.