

Demographic Data and Stories of Food for Families with Children in Hillview and River Valley Village Housing Communities

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Executive summary

The objectives of this research project were to investigate barriers to the accessibility, affordability and availability of adequate, nutritious food at the housing complexes River Valley Village and Hillview in Lewiston, ME. This research in conjunction with the overall goals of the Lewiston Community Food Assessment allows for a more thorough investigation into the issue of food insecurity. The USDA defines food insecurity as: “limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (Cohen, 2002). We compiled quantitative, demographic information through the U.S. Census Bureau, as well as through interviews with managers the River Valley Village and Hillview housing complexes. Further, we interviewed heads of households at River Valley Village in order to gain personal narratives about their stories of food.

The demographic data we collected revealed: 1) SNAP usage is increasing in Lewiston and Androscoggin County, 2) SNAP usage is more prevalent in River Valley Village as compared to Lewiston, 3) There is a higher percent of single parent households in Hillview than in Lewiston, 4) There is a larger proportion of children in both Hillview and River Valley Village relative to Lewiston.

Our interviews revealed five major themes related to food insecurity in the River Valley Village housing community: 1) Heads of households reported an insufficient budget to meet household food needs, 2) Heads of households often put the food preferences and needs of their children and grandchildren before their own, 3) Heads of households reported buying and eating lower quality foods than when they grew up, 4) Heads of households stretch their food dollars through buying items in bulk, on sale, and using coupons 5) Transportation is a major barriers to accessing food for the heads of households.

Through analyzing these results and compiling both our quantitative and qualitative information, we found three broader themes as conclusions to our study: there were gaps between the demographic data collected and the ethnographic research, proving that both methods are necessary to fully understand existing problems and develop effective solutions; despite food assistance programs used to supplement the budget of low-income families, many families still have an unmet need to access sufficient, nutritious food; and children are an extremely vulnerable population when it comes to food insecurity.

Contents

Executive Summary.....	2
Introduction.....	6
Methods.....	6
Results of Demographic Data.....	7
Interpretation of Demographic Data.....	12
Results/Discussion of Interviews.....	13
Insufficient Food Budget for Household Needs.....	13
Putting Children and Grandchildren’s Needs First.....	14
Buying and Eating Lower Quality Foods.....	15
Stretching Food Dollars.....	16
Participation in Food Assistance Programs.....	16
Transportation.....	17
Conclusion.....	19
Discrepancies between demographic data and interviews.....	19
Determinants of Food insecurity (SNAP, Children, and Family Structure).....	19
Children as Vulnerable Populations.....	20
Limitations.....	21
Future Research.....	22

Appendix.....	23
Hillview, Lewiston Public Housing Complex Questions for Shari LeTourneau.....	23
River Valley Village Interview Questions for Tina McBride.....	23
River Valley Village Questions for Heads of Households.....	24
Consent Form.....	25
Table 1: Lewiston demographic data from the 2006-08 census data.....	26
Table 2: Demographic data of Hillview residents.....	29
Table 3: Demographic information for River Valley Village.....	30
Figure 6: Ethnic distribution within Lewiston, River Valley Village, and Hillview.....	31

Tables and Figures

Figure 1: Percent of households receiving supplemental Nutrition Assistance in Androscoggin County and Lewiston.....	8
Figure 2: Number of Lewiston households using the federal Supplemental Nutrition Assistance Program (SNAP) for the years of 2008, 2009, and 2010.....	9
Figure 3: Food assistance usage compared between River Valley Village and Lewiston.....	10
Figure 4: Percent of single parent families out of all families in Lewiston.....	11
Figure 5: Percent of children (individuals under the age of 18) for Lewiston, Hillview, and River Valley Village	12
Figure 6: Ethnic distribution within Lewiston, River Valley Village, and Hillview.....	31
Table 1: Lewiston demographic data from the 2006-08 census data.....	26
Table 2: Demographic data of Hillview residents.....	29
Table 3: Demographic information for River Valley Village.....	30

Introduction

Food insecurity is a national problem that affects 11.1% of US households (Chilton & Rose, 2009). More than 12 million children face food insecurity in the US, which affects their cognitive and emotional growth, as well as school performance and lifelong development (Chilton & Rose, 2009). Between 2000 and 2005, the percentage growth rate of hungry people in Maine was the highest in the country (Schalit, 2007). As the Kennebec journal stated, “Hunger in America is obese children whose parents can afford to buy calories, but not nutrition” (Schalit, 2007).

The community-based organization Local Food for Lewiston, through the Community Food Assessment, seeks to address the challenges of food insecurity by developing a comprehensive plan with effective solutions to benefit community members. These solutions seek to promote the accessibility, availability, and affordability of healthy foods. In defining the availability of enough nutritious food, our group asked: is it actually there? Our definition of the accessibility of sufficient nourishing food asked: can community members get to the food? Lastly, we defined affordability by questioning: do community members have the means (through income or food assistance programs) to buy enough nutritious food?

Prior to our research, the Lewiston Community Food Assessment focused on downtown Lewiston, specifically census blocks 201 and 203. The housing complexes of River Valley Village and Hillview do not fall in these census blocks; therefore, there is no data regarding food insecurity in these communities. Because of the low-income status of many residents, food insecurity is often prevalent in subsidized housing communities. In our semester-long project, we focused on collecting demographic data from Lewiston, Hillview, and River Valley Village, as well as personal narratives and stories of food from heads of households at River Valley Village. Demographic data collected includes participation in food assistance programs, age, number of children, and family structure.

Not everything affecting these vulnerable populations can be determined from demographic data. By compiling personal narratives with demographic data our research will help Local Food for Lewiston reduce food insecurity by providing insight into the needs, wants, and opinion of community members. This data helps fill in the gaps of information in the census block data. Our findings will be used to contextualize these issues and put forth a plan of action that will mitigate food insecurity.

Methods

Our project focuses on the collection of demographic data and personal narratives from two low-income housing communities in Lewiston, Maine. The three main methodological approaches used include: web-based research, collection of demographic information, and interviews with heads of households at the private housing complex River Valley Village. Our research focuses on the city of Lewiston, with specific interest in one government subsidized housing complex (Hillview) and one privately subsidized housing complex (River Valley Village).

Search terms defined

We defined demographic data in terms of the aggregation of empirical, statistical, and mathematical populations in terms of race, gender, socio-economic status, and other such categories. Housing owned and managed by the government constitutes government-subsidized

housing. Private housing refers to housing owned and managed by the private sector. Personal narratives obtained by interviews refer to stories collected from respondents that contextualize the demographic data by providing concrete examples of resident opinions and experiences.

Web-Based Research:

The beginning stages of our methods consisted of a general overview of food insecurity via online academic databases and relevant literature. Academic databases and relevant literature utilized include: SCOPUS, Google Scholar, Academic Search Complete, and the Lewiston Sun Journal. We also consulted the U.S. Government Census Bureau website. Our group also used web-based research to ascertain the ways in which quantitative (demographic data) and qualitative (personal narratives), could be used concurrently in order to provide the general audience with a well-synthesized set of information.

Collection of Demographic Data:

Federal census data was obtained electronically and used to synthesize demographic data for the city of Lewiston. Data for Hillview and River Valley Village was collected through interviews and email correspondence with Shari LeTourneau of the Lewiston Housing Authority and Tina McBride of the Caleb Foundation (see Appendix A for questions). Demographic information requested includes: ages of community members, gender distribution, race, car ownership, age, employment, average income, if they receive federal benefits, and participation in food assistance programs. We aggregated the summary statistics into tables on a data sheet on Microsoft Excel. Then, we created graphs and figures for the most relevant data that corresponded to the different populations and demographic categories, e.g. River Valley Village vs. Lewiston as a whole, in terms of age distribution.

Interviewing Heads of Households

Interviews with heads of household were conducted at River Valley Village with the help of Tina McBride. After an initial meeting, Ms. McBride invited our group to two separate luncheons held for residents at River Valley Village. Interview questions were divided into themes of accessibility, availability, affordability, and perceptions and motivations, and were reviewed by our community partner. Revisions were made before the first interviews were conducted (See Appendix B for interview questions).

Interview participants were informed of the class and project goals before being asked to sign a consent form (Appendix C). This consent form served to notify the interviewee of his voluntary participation, his right to discontinue the interview at anytime without penalty, and the possible use of personal information and quotations. Participants were also given the names and contact information for our advisor and community partner. Interviews were later transcribed and coded in terms of larger connecting themes.

Results: Demographic Data

We collected demographic data on Lewiston as a whole via online and newspaper research. We conducted interviews with Shari LeTourneau of the Lewiston Housing Authority, in regards to the Hillview Housing Complex and Tina McBride of the Caleb Foundation, in

regards to the River Valley Village Housing Complex. We compiled data from the two housing complexes and compared them to the rest of the Lewiston population.

The work development assistance program at River Valley Village has worked with many residents (74) through work assistance to help improve their financial situations and overall living conditions. The most common reason residents sought work force development assistance was because of a lack of financial resources. Almost 70% of these participants are unemployed.

The unemployment rate for Lewiston is 7%, which is 2% below the national average (“Androscoggin County Quick Facts,” 2009). Hillview had a much higher unemployment rate at 64% than Lewiston as a whole; however, because the metric used to calculate such data was not comparable, future research should attempt to confirm or deny this.

Based on individuals and households, we calculated the percentage of people using Federal Supplemental Nutritional Assistance Program (SNAP). We determined that more individuals in Lewiston used SNAP than individuals in Androscoggin County as a whole, and in both cases the percentage of individuals using SNAP has been rising from 2008 to present.

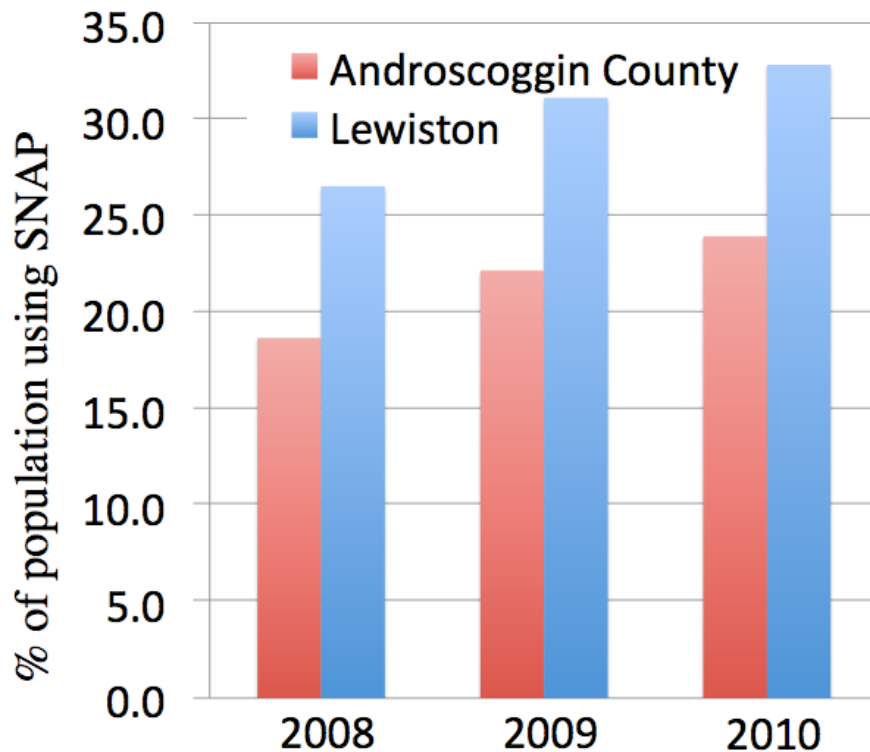


Figure 1: Percent of households receiving supplemental Nutrition Assistance (formerly known as food stamps) in Androscoggin County and Lewiston specifically for 2008, 2009, and 2010 (Adams, 2010). Percent of individuals in Lewiston was based off 2005-2009 census data. This percent for Androscoggin County was based on a 2009 U.S. Census Bureau estimate. Both of these percents assume the population has remained constant, although we know this is not the case (“Androscoggin County Quick Facts,” 2009).

The number of households using SNAP has increased by 30% between 2008 (4,805 households) and present (6,247 households).

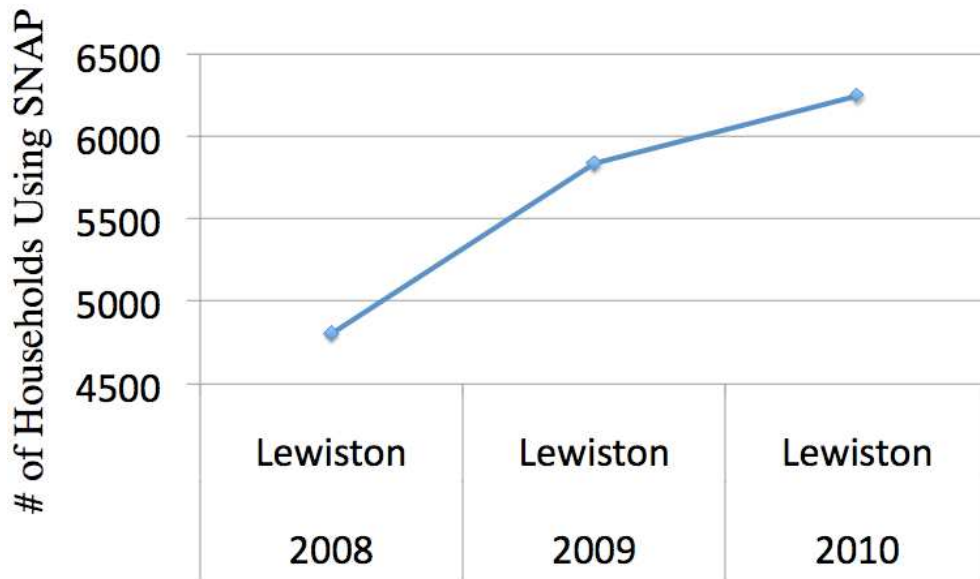


Figure 2: Number of Lewiston households using the federal Supplemental Nutrition Assistance Program (SNAP) for the years of 2008, 2009, and 2010 (Adams, 2010). A group of individuals must live within the same household to be included within one plan for SNAP (“Maine Department of Health and Human Services,” 2010). Percents assume the population has remained constant, although we know this is not the case (Androscoggin County Quick Facts, 2009).

One in every three Lewiston residents uses the Federal Supplemental Nutritional Assistance Program and although the data is not comparable, it is striking that almost every single person in River Valley Village uses some form of food assistance.

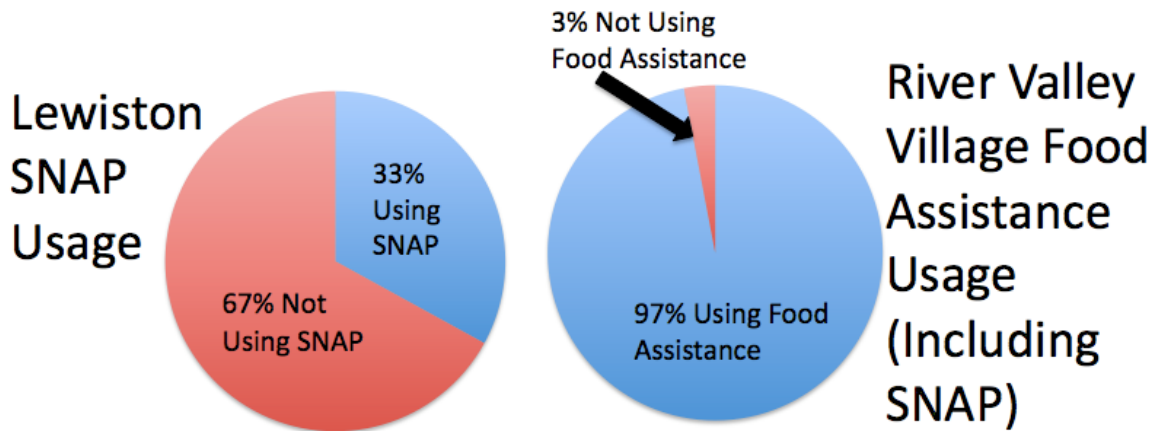


Figure 3: Food assistance usage compared between River Valley Village and Lewiston (Tina McBride, 2010; Adams, 2010). Note that although River Valley Village includes every kind of food assistance used, while Lewiston data includes only SNAP. Because of this are data are not directly comparable, however we can assume there are similarities between the two.

One interesting finding is the percentage of families and individuals whose income in the past 12 months was below the poverty line. Out of all the families in Lewiston, 18% of the families are below the poverty line. 34% of families with children under 18 are below the poverty line. 63% of families with a female head of household, no husband present, and children younger than 18 years old are below the poverty line (See Appendix D for Table 1).

At Hillview, 39% of the families are single parent families. This is 27% higher than single parent families in Lewiston. Also, the average household income is \$1,000 per month.

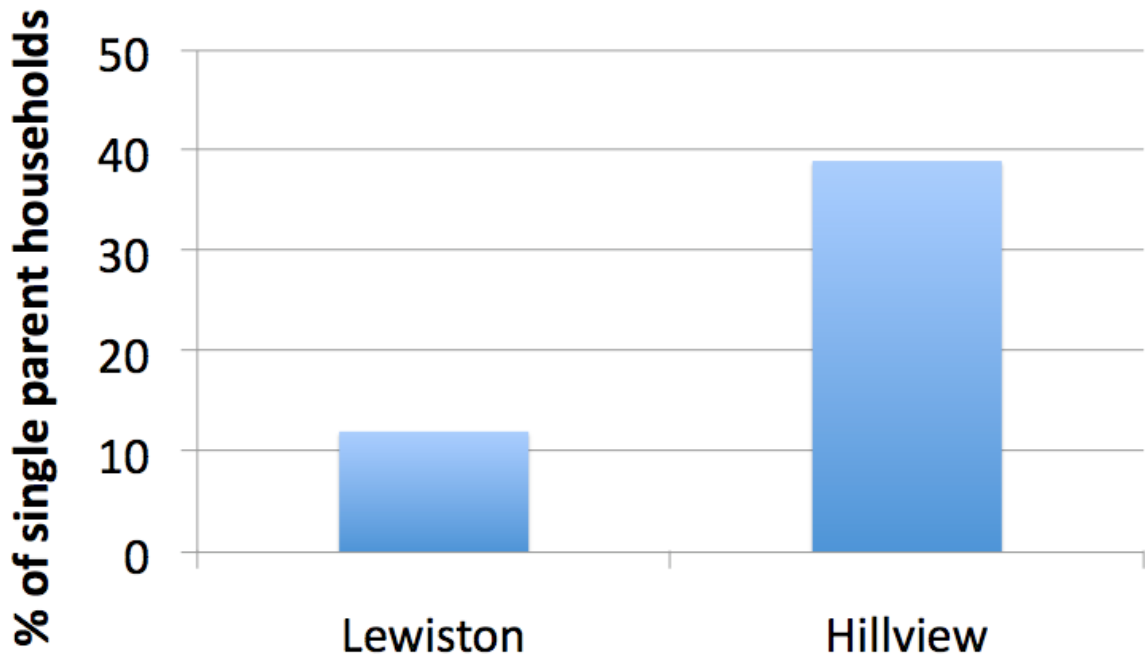


Figure 4: Percent of single parent families out of all families in Lewiston (“Androscoggin County Quick Facts,” 2009) and in Hillview (LaTourneau, 2010).

In both housing communities, around half the residents are children. Children make up 54% of the population in Hillview and 47% of the population in River Valley Village. Proportionally, there are 33% more children in Hillview than in Lewiston as a whole. Similarly, there are 26% more children in River Valley Village than in Lewiston as a whole.

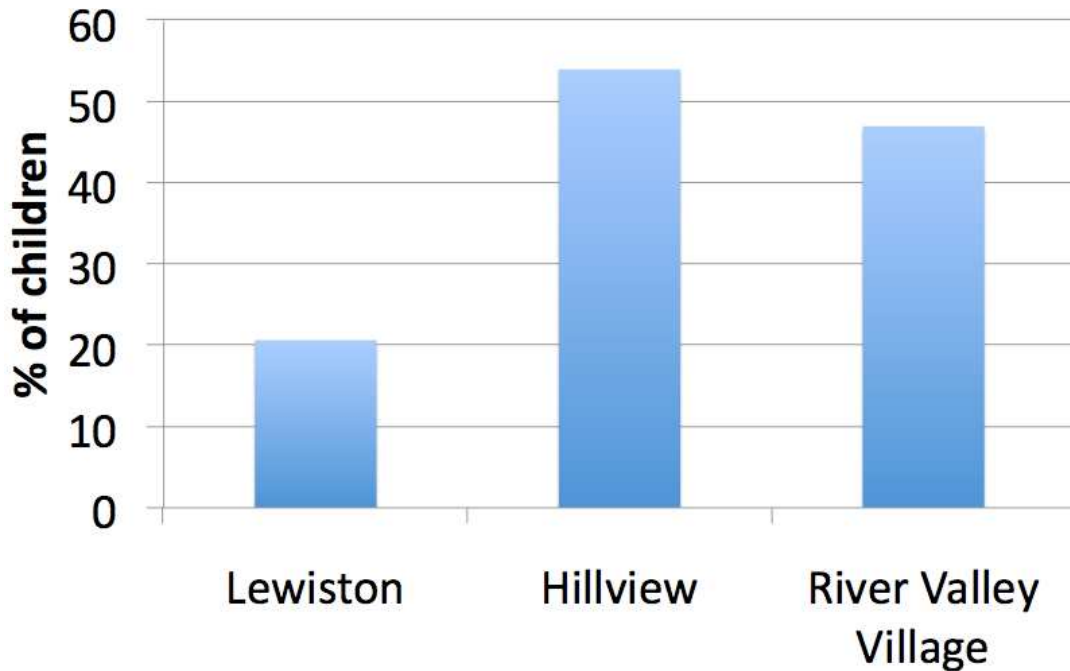


Figure 5: Percent of children (individuals under the age of 18) for Lewiston (“US Census Bureau 3-Year survey Lewiston,” 2008) Hillview (Shari LeTourneau, 2010) and River Valley Village (Tina McBride, 2010).

Interpretation of Demographic Information

SNAP, previously known as food stamps, is a federally funded program, which provides food assistance for those in need (Adams, 2010; “National School Lunch Program,” 2009). This program is offered to those seeking help for payment of food. We have identified participation in food assistance programs as a determinant of food insecurity. Using this as our measurement of food insecurity, our data shows that food insecurity is more prevalent in Lewiston as opposed to Androscoggin County. This makes Lewiston a good focus area and reinforces the importance of the CFA’s mission of helping Lewiston residents.

The increase in household SNAP usage can also be attributed to an increase in food insecurity within families. This increase emphasizes the growing problem of food insecurity, thus, our project is necessary to demonstrate that food insecurity in these housing communities needs to be addressed.

Some of our most interesting findings came from the data we collected on households that fall below the poverty line. Well over half (62%) of families with children supported by single mothers were under the poverty line. This finding supports what we found in Schwartz-

Nobel and applies the struggling single mother story to many women within Lewiston (Schwartz-Nobel, 2002). Because of the high rate of single parent families that seek help at Hillview, it is evident that struggles exist in these families (Fig. 4).

If we extrapolate this trend that the residents of River Valley Village use SNAP before other forms of assistance, we could conclude that 97% of residents using some form of food assistance are most likely using SNAP. If this is the case, then we can say that there is a drastic increase in SNAP usage within River Valley Village. As a result, we have a measurement to display that food insecurity within this housing complex is more prevalent than in the rest of Lewiston. The data illustrates that we have a concentration of food insecure individuals living in River Valley Village; Local Food for Lewiston can therefore focus their efforts on this vulnerable population and begin developing solutions to fight food insecurity in this housing community. The relatively large proportion of children living within the housing complexes represents a risk for food insecurity because many of these children depend on their parents, which could strain their parents' resources.

Interviews with Heads of Households

We conducted interviews with heads of households at River Valley Village in regards to the accessibility, availability, and affordability of adequate, nutritious food. Our interviews also included questions about their relationship to food and their perceptions and meanings of food. For a complete list of interview questions, see Appendix B. Common themes that emerged from the interviews include: not meeting household needs with their allotted food budget, feeding their children and grandchildren before themselves, eating lower quality food today than when they grew up, stretching food dollars in order to buy more food with less money, and transportation as a barrier to accessing food. What follows is a combined results and discussion section structured by the main themes from our interviews. This is then followed by a conclusion of broader themes.

Insufficient Food Budget for Household Needs

Many interviewees reported that they could not meet their household food needs with their current food budget. Respondents reported spending anywhere from \$200-\$1000 dollars per month based on family size and structure and the type of food purchased.

Patricia S. allots \$50 per week or about \$200 per month to spend on food. Although she is the only adult in her household, she is responsible for her three grandchildren (ages 10, 15 and 17) on the weekends and often during the week as well. Similarly, although Teri only lives with her husband, she frequently cares for her five grandchildren and must account for their needs when shopping for food. Regarding the sufficiency of her food budget Teri said, *"No. I still gotta go back. You run out. It doesn't last a long period of time, so you gotta keep replenishing."*

Patricia L. is a single mother living with her seven-year-old daughter who stated that her food budget has *"got to be between 2 and 3 hundred. After the food stamps its got to be close to 4."* Linda is also a single resident, but she lives with her 15-year-old grandson.

For a family of four consisting of two adults and two children (ages 8 and 4), John reported spending \$550-600 a month on food or about a quarter of his income, which he believes is *"way too much."* Steve and his wife Nancy spend between \$350-400 per month on food for their household that consists of themselves and their two sons (one is in college). Nancy said

that one-third of their income is allotted for food purchase and continued, *“the money doesn’t cover our household’s needs, that’s why we go to the food bank.”*

Awil from Somalia reported spending \$1,000 a month on food for his household of four adults and four children, while Deena said she spends almost \$600 a month to feed her a family of two adults and two children. She says, *“I don’t really do the shopping per week. I do it per month. I get \$530 from food stamps so obviously all that goes on food and by the first of the month I get my paycheck and spend about \$75-100 of it on food.”*

The amount of money spent on food varies among the interviewees based on the number of people per household, food preferences, and dietary restrictions. Budgets also varied based on participation in food assistance programs, which will be discussed in detail in a later section.

Putting Children and Grandchildren's Needs First

During our interviews it became clear that heads of households often put their children’s food needs before their own. Linda and Patricia S. are two such respondents who put their grandchildren before themselves when it comes to providing food. Patricia S. described her relationship to food and the decisions she makes saying, *“I’m very afraid. I know I don’t have enough to last me and I’m very much afraid. I will go hungry before I let my grandchildren. And its not like my daughter doesn’t help send them with food, she does, but there is still never enough to go around.”*

Supporting her grandchildren proves especially difficult for Patricia S. because she is not able to collect food from the food bank for them because they are not permanent residents in her household. This challenge will be discussed further in the section on food assistance programs. Patricia S. also mentioned that it is difficult to provide for both herself and her grandchildren because she has specific dietary needs due to a brain injury. She said, *“I don’t have enough money to buy what I need because of my choking disorder.... I need special foods and I cannot buy them because they’re too expensive.”*

Linda voiced similar concerns and stated that she knows she does not eat enough, but she would rather see her grandson well fed. Further, she lets her grandson eat first so that he gets enough to eat; after he finishes, she eats whatever is left.

When asked about typical meals in her household for herself and her seven year old daughter, Patricia L. said, *“My daughter is um either cereal or warm toaster strootles or something on that end. Uhh I don’t eat breakfast. I have coffee. Lunch she eats at school so that varies um from today. Uhh I don’t eat lunch. I have coffee haha. And at dinner it varies. She eats lamb chops or steak or macaroni and cheese. It just depends on the night. She’s a big meat eater. She likes her meat. We do all different varieties of stuff. We try to keep it interesting.”*

Although Patricia L. pays careful attention to what her daughter likes to eat and drink, she does not consider her own dietary needs and often skips meals. She shops according to her daughter’s preferences and said, *“My daughter she likes her milk and bread and I get the juice boxes quite frequently.”*

Patricia L. became restricted in her ability to buy adequate, nutritious food when she received a raise, resulting in a decrease in food stamps. She feels that this is especially a burden due to providing for her seven year old daughter, who likes particular food, such as milk, bread, juice, and meat. During the interview, she only talked about what food her daughter liked to eat, and did not mention any preferences she has for food. Therefore, her daughter's food preferences take priority in her household.

While Teri lives with her husband, she also provides for her five grandchildren, ages 10, 5, 4, 3 and 3. She said her grandchildren are over *"a lot."* She provides food for them but *"they also bring food too when they come."* When asked who she eats with, she responded, *"My husband mostly, I have my grandkids all the time. I send them off to school, so sometimes I fix them a little something or they eat at school. My dinner meals, if my husband's home from work, we eat together; if not sometimes my grandkids are there to eat with me, my kids come over."*

The fact that some heads of households reported providing food for their grandchildren, who are not documented on census or demographic data, shows additional obstacles for the accessibility, affordability and availability of adequate, nutritious food. This is an important gap between the demographic data and the qualitative information gathered through interviews. Many times the grandchildren stay with their grandparents while their parents work or if their parents are unavailable. Therefore, through our interviews with heads of households we found that non-traditional family structures exist in River Valley Village, which can add additional burdens in accessing food if the grandchildren cannot be included in food assistance programs.

Buying and Eating Lower Quality Foods

Another theme that we encountered was that interviewees eat lower quality food that now than they did in the past. Patricia S. and Pamela both stated that the quality of food they eat on a daily basis is not as good as the food they grew up eating. Patricia S. stated, *"It has changed a lot..a lot more sweets, very little homemade food, the quality of the food is not as good. My opinion on that is the quality of the food is nowhere near as good as it used to be."*

Pamela responded similarly and said, *"The nutrients aren't there."* As a child she had nutritious food such as roast beef, and her mother was a stay at home mom who cooked for her family. Deena described a similar experience and explained that the food eaten now is *"A lot different. My mom is Italian so we used to have meals constantly, breakfast, lunch, and dinner with fruits and salads so I grew up 18 years of that so I barely eat any fruits or anything now."*

Awil discussed the difference in food quality that he noticed after immigrating from Somalia to the United States. He said that the food here is *"very different because in my country, Somalia, I ate fresh food, meat, water. Everything here frozen."*

In contrast, other interviewees responded that the nutrition level of the food eaten today is the same or better than in the past. For example, Nancy stated, *"My diet is better today. We were very poor growing up and there was not much money in the home, there were 5 kids and 2 parents. Now I usually get regular meals and they are more nutritious."* Steve also reported more nutritious food today and said, *"It's better, yeah, it's better. Even though the food that I grew up with consisted of meats, potatoes, vegetables – that was an every day, 7 days a week"*

meal. The only difference I see is that when my grandmother would fry bacon or fry eggs, she would save that fat and use it with other stuff. It's just that how I grew up with. It took me a while to break that habit, but with my wife's help, it was broken, so it's definitely better."

Stretching Food Dollars

Many interviewees also described stretching food dollars to meet household food needs by buying in bulk and buying products on sale. Linda stated that she tries to buy cheaper products and food that lasts, such as pasta, as well as trying to buy in bulk. Pamela, Patricia S., and Nancy also buy products in bulk. Patricia S. quite often buys products for one because she lives by herself, but she buys food in bulk when her grandchildren stay over.

Teri utilizes her freezer to store the bulk items that she buys and said, *"I buy in quantity. I have a freezer, so if I can buy in quantity, I buy in quantity. I split it up. I package it differently. And I freeze it. I try to make it stretch, like I say I have my grandkids. I have one of them all day 'cause the mom works. And the other two are in school, but when they come over it's snacks, and sometimes it's a meal, and...I try to stretch as far as possible."* When asked if she does anything to stretch her food dollars Deena emphatically replied, *"Oh yes definitely. Well since it's only the two of us when we get meats we go to BJ's and they have the big packages of meats like the family sized packs and then we'll divide them up."*

Different families go about stretching their food dollars in many creative ways. Stretching their food dollars is sometimes a necessity. Many of these families are food insecure because they do not have the necessary funds to secure an adequate, healthy meal.

Participation in Food Assistance Programs

Most of the heads of households interviewed participated in food assistance programs. Linda receives food stamps and Seniors Plus, while Joe's family, Awil's family and Pamela also receive food stamps. Patricia S. utilizes a food bank, which she found out about through her church, River Valley Village, her doctors, and a social worker. She reported difficulties with the food bank including no options for her dietary restrictions, no one to help carry out the crates of food, and the food banks not providing food for her grandchildren. She stated, *"Because my grandchildren are not permanently living with me, I'm not allowed to collect any food for them. Even though they're there to assist me while their parents work, they're not allowed to benefit from the help they give me."*

Deena receives food stamps and WIC benefits and describes a similar challenge of not receiving benefits for her infant daughter. *"It's kinda hard because WIC and food stamps it because I don't get food stamps yet for my daughter because she's not really eating food. And formula is like extremely expensive. The baby powder. And she has to be on soy so its super expensive, like 15 dollars for a little one. And WIC only gives me 9 and she's eating like 12 or 13 a month..."*

Nancy and Steve participate in Food Stamps and a Farm share at Kennedy Park; she found out about these programs through her caseworker. When asked what she likes about these programs, she stated, *"I think they were pretty good. The farmers were friendly, say 'here are new vegetables you could try.' I like that because I like to try new things."*

Pamela reluctantly participates in food assistance programs and stated, *“I don’t want use the food stamps, but I have to.”* Pamela is disabled, thus she needs to use food stamps because she is unemployed and does not make enough money to provide for herself. If given the opportunity to become healthier, she would prefer to work so that she would not have to rely on food stamps.

Whether it is WIC, food stamps, food banks, or farm shares, each of these programs provides the residents of River Valley Village an opportunity to access food for their households. Some of these families have children with certain dietary needs, which necessitates more money for such products, resulting in increased need for food assistance programs.

Transportation as a Food Access Barrier

Transportation is a barrier to accessing sufficient nutritious food for many of the heads of households interviewed. Patricia S. stated, *“Transportation can be a major issue, you cannot carry groceries on a bus. When my car is not running, I can’t go on weekends, my grandchildren will go with me because there’s no buses. There are no buses on the weekends in Lewiston-Auburn.”*

When asked, “What are the means of transportation to buy food?” Patricia S. responded, *“When I have money for gas, my car. When I don’t, I just don’t go get food...Also, transportation is a major problem for 80% of the people who live here. Transportation is a major problem.”*

When asked, “Does a bus come up to River Valley Village?” Patricia S. responded, *“Yes it does, but the last bus is 5:00 in the afternoon, 4:30 and there is no weekend transportation. There is no evening transportation, and I have to go between 7 and 5. But here we have a lot of children home from school early so parents have to go when they get back. And you have to carry your stuff, you can’t do that. I personally can’t carry it. I live right over there, I get out of the bus here, I still can’t get it. And taxis are \$10 because we cross the bridge to go to another town. It’s ridiculous but we do. One thing I really want to make strong is that no one in any of the places you go that gets food to you, no one helps you carry it out. That is a major problem for those of us with a disability. You can ask and ask and ask, but we gave you the food, get it out. There is no sympathy there. I hope this helps.”*

Pamela stated that her car is broken, affecting her access to food. She said that it is *“harder to get to the store.”* She takes the city bus, which picks her up in front of her house. Similarly, Patricia L. stated, *“I have my own vehicle. Fixing the vehicle is an issue...”*

Steve also reported transportation as a problem. He stated, *“Transportation would definitely be a problem. Uh, I have a license, but I don’t have a car yet, so we rely on the bus system. Taxi is way too expensive, we found out, so uh..as long as you can carry on the bus, like I could have two bags, my wife could have two bags, that’s fine. But yeah I still find it a hindrance.”*

Nancy agreed that transportation can be a problem to accessing food. She stated, *“Sometimes transportation because I don’t have a car. I can only take one bag on the bus. I take the bus to the grocery store but I have to get somebody to bring me back. I have to wait ‘til they can come.”* Deena also identifies transportation as a barrier and says that it is difficult to carry many groceries on the bus. She said, *“We have to use the bus. Sometimes, because you’re only allowed to carry so many bags on the bus. Yeah whatever you can carry.”*

Overall, transportation arose as a major obstacle to accessing adequate, nutritious food during our interviews with the respondents. One problem was that some respondents did not have a car and could not carry enough groceries on the bus or from the bus to their home. Patricia S. addressed the need for assistance in carrying groceries, especially for the elderly, the disabled, and parents with children. As she stated, there is *“no sympathy”* for people needing assistance carrying food. As mentioned above, many of the respondents stretch their food dollars by buying in bulk. While this saves them money, it is difficult to buy in bulk if they travel by bus because there is only so much they can carry. Another problem was dependence on others who have cars so they can shop in bulk and don’t have to worry about carrying heavy bags of groceries on the bus or walking them to their home. This prevents the respondents from strategically buying in bulk, and requires them to make more trips to the store, spending more money on transportation. The respondents also stated that taxis are too expensive.

The limited bus hours is a problem for working parents and heads of households who have children due to no buses running in the evenings or on weekends. People therefore are severely restricted on when they can utilize the bus services to go shopping. Bringing children grocery shopping also poses more obstacles, as parents cannot carry as much. While some respondents stated that they do have cars, they mentioned additional obstacles such as paying for gas and fixing the car.

Although many heads of household responded that transportation is one barrier affecting food access, others were not affected. Teri owns a car and uses it as her primary means of transportation to and from the grocery store. Imo also owns a car and said that transportation is not a challenge for his family. When asked if transportation is a barrier to accessing food, John stated, *“Nope if somebody let’s say doesn’t have their license or what not we have bus transportation that you can get for free.”*

Conclusion

Discrepancies between demographic data and interviews

While it is extremely important to gather demographic data, we found that numerical and demographic information often hide certain truths. Therefore, it is important to complement this demographic data with ethnographic research, such as the interviews that we conducted with heads of households at River Valley Village.

One such gap between the demographic data and qualitative information involves access to transportation. For example, the demographic data may document that a family owns a car, but does not reveal if the family has money to pay for gas to use the car (as in Patricia S.'s case), if the head of household cannot repair the car if broken (as in Pamela's case), or if the head of household is disabled and cannot drive the car without assistance (Patricia S.'s case). An additional problem that cannot be documented in demographic data is that many heads of households cannot carry sufficient groceries from the store to the bus or car, or from the bus stop to their home (as stated above in regards to Patricia S...).

Another gap between the demographic data and the personal narratives relates to the number of people in each household and the presence of non-traditional family structures, such as grandparents providing food for their grandchildren. This causes a problem when the grandparents, mostly grandmothers in the interviews we conducted, could not use the food bank or food assistance programs to purchase food for their grandchildren because they are not documented as permanent residents. Both Patricia S. and Teri have this problem.

Further, Deena encountered problems with providing soy milk for her infant because she could not use food stamps to pay for it "*because she's not really eating food.*" The assistance she gets from WIC does not cover the expensive cost of soy milk formula for her child. We also found through our qualitative interviews that WIC and additional food assistance programs such as food banks and SNAP provide money for food but do not take into account the quality of food.

Some of our demographic data did not have comparable measurements between Lewiston, River Valley Village and Hillview. However, we were able to combine the demographic data with our ethnographic research in order to draw significant conclusions. This was especially helpful in comparing Lewiston SNAP usage versus River Valley Village general food assistance usage. This data is not comparable, but because our interviews suggest that SNAP is the most commonly used food assistance program, we can assume that most of those receiving some kind of food assistance are receiving SNAP.

Although both qualitative and quantitative data are important, the combination of the two is even more informative. The discrepancies between the two demonstrate the weaknesses within each form of data and can help us determine gaps and common themes.

Determinants of Food Insecurity (SNAP, Children, and Family Structure)

There are three factors affecting eligibility for public housing: "1) annual gross income; 2) whether you qualify as elderly, a person with a disability, or as a family; and 3) U.S. citizenship or eligible immigration status" ("HUD's public housing," 2010). Because of the low-income status of many residents, food insecurity is often prevalent in subsidized housing communities. We defined determining factors of food insecurity as SNAP usage, number of children, family structure, and personal accounts describing food insecurity.

A household with a lower income may have a smaller food budget, which increases the difficulty of satisfying household food needs. This means that the average Hillview household income of \$1000/month increases the changes of the households being food insecure (LeTourneau, 2010). Unfortunately we were not able to collect this data for both Lewiston or River Valley Village and so we were unable to compare the three groups.

Another measure of food insecurity was SNAP usage in Lewiston, Androscoggin County, and, after combining qualitative data, in River Valley Village. As we have shown, this usage is increasing (Fig. 1 and Fig. 2). The very high occurrence of SNAP usage in both Lewiston and even more so in River Valley Village demonstrate the significance of this problem.

We found that River Valley Village and Hillview had significantly higher percents of children compared to Lewiston, suggesting that these areas had a higher likelihood for food insecurity.

Single parent families are more likely to be below the poverty line (“US Census Bureau,” 2009). Our information shows that single parent families are more prevalent in Hillview compared with Lewiston and so it shows that this population is more food insecure.

Furthermore, from our ethnographic research we found that many of the heads of households did not feel that their current budgets were meeting their food needs. This demonstrates the serious inequality in accessibility, availability and affordability of enough nutritious food because income in addition to food assistance programs still does not give families with children in Hillview and River Valley Village sufficient budgets for the food needs of their households.

Children as Vulnerable Populations

In 2007, almost 16% of U.S. households with children struggled to satisfy basic food needs, indicating a level of food insecurity (Nord, 2009). Thirteen million children in the United States have poor overall health due to their limited access to sufficient nutritious food (“The Consequences,” 2002). Children are an especially vulnerable population because of both immediate and long-term effects of food insecurity. They are more likely to suffer from ear infections, iron deficiency anemia, behavioral disorders, poor mental health, social problems, and hospitalizations (“The Consequences,” 2002). As a result, these children may miss school and be less prepared to learn (“The Consequences,” 2002). As the Children’s Defense Fund states, “In the end, it is the children who bear the greatest costs including the lifetime of lost learning and lost potential for advancement with even a short stay in an impoverished family” (Schwartz-Nobel, 2002, 36). Mantsios stated that class significantly impacts opportunities for educational achievement (Mantsios, 2007).

The public housing complex Hillview and the private housing complex River Valley Village both have high percentages of children in the resident populations. The percentage of children at River Valley Village is 54% and the percentage of children at Hillview is 47%. These are significant numbers, evident in the fact that the population at River Valley Village is 846, and the population at Hillview is 613. These proportions of children in both of the housing complexes are higher than the proportion of children in Lewiston, which is 21%.

The high percentages of children at these housing complexes therefore put additional stress and pressure on parents and grandparents to provide adequate food for their household. In many food insecure households, parents sacrifice their own nutritional needs in order to maintain an adequate diet for their children; however, 8.3% of households nationwide indicated that both adults and children were food insecure (Nord, 2009). As our ethnographic research showed, our

interviewees commonly reported putting their children or grand children's food needs before their own. For example, Patricia S. said, *“I will go hungry before I let my grandchildren.”* Because of the barriers in accessing enough food, the nutrition level of food that parents and grandparents provide their children and grandchildren and eat themselves is generally of a lower quality than when they grew up.

The respondents had varying opinions on the quality of food they eat today versus the quality of food they ate growing up. Because food insecurity is related to poor health, people who are food insecure tend to have a “less varied diet, a lower intake of fruit and vegetables, and a diet that is nutritionally inadequate, leading to micronutrient deficiencies and malnutrition” (Gorton et al., 2010, 2). Having good quality of food in the home is extremely important for children. The difference of eating healthy food versus non-healthy food could make a big difference when it comes to a child’s physical, mental, and social development.

Long-term concerns due to food insecurity in children include decreased worker productivity and higher health care costs, which can further maximize the challenges of food insecurity (Cook & Jeng, 2009). Food insecurity affects future success and productivity by impacting children’s learning capabilities, developmental effects, mental, emotional and physical health.

If these inequalities in accessibility, availability and affordability of adequate, nutritious food continue to exist for families with children, they could become entrenched for the next generation. Future generations will continue to face these problems, which will affect national productivity. It is important to develop effective and lasting ways to attempt to erase these inequalities overtime. Finding out the problems is the first step.

Limitations

Our group did our best to provide comprehensive initial data about River Valley Village and Hillview housing communities. Unfortunately, after conducting our interviews with the heads of the housing communities, we were not able to obtain all the information that we wanted due to time constraints and lack of documentation by the housing units. For instance, we would have liked to collect information regarding: level of education, average income, citizenship status, disability status, car ownership, and other such data. We hope that future students will continue collecting information regarding these two housing communities in order to fill in the gaps of our data collection.

Another limitation that we encountered was the number of interviews with heads of households that we conducted. We were unable to interview any of the 613 residents at Hillview. We were also only able to conduct interviews with 11 heads of households at River Valley Village out of the 864 known residents. Eleven interviews is a very small sample size, and it is not representative of all the residents. Further, the interviews occurred after two luncheons hosted by Tina McBride of River Valley Village. The population that we interviewed was not a necessarily a representative sample of River Valley Village because it did not include people at work; the interviews were conducted on an early Friday afternoon and early Thursday afternoon.

Another major limitation is the fact that only one of the 11 interviews that we conducted was with a Somali head of household. Africans and African Americans make up 47% of the population at Hillview and 56% of the population at River Valley Village. In order to gain a more nuanced understanding of the intersectionality of race and class, more interviews with African or African American residents should be conducted. This would require more time and

access to translators to bridge the language barrier.

While conducting interviews for our project with people from different backgrounds, such as people of different ethnicities, classes and gender, our group needed to realize how our positionality and previous assumptions affects our research. Our positionality, or the position we have in society in regards to the intersections of race, class and gender, have the ability to affect our research project. We attempted to frame our interview questions in the most sensitive and clear ways possible.

Our positionality also affected how we were perceived by interviewees. Bates College students are often seen in a position of privilege. The fact that everyone in the group is white might affect responses of residents. Respondents might feel resentful or embarrassed because of a perception that we do not or have not struggled with food insecurity. This might affect their answers and their willingness to be honest. While certain respondents might describe their situation as worse than it really is, others might be too proud, and make their situation seem better than it really is.

Future Research

This final report is one of many steps that are necessary to better understand problems affecting the accessibility, availability and affordability of enough nutritional food for families with children in Lewiston. In the future, additional demographic data is necessary to better supplement the data obtained from the census and provide Local Food for Lewiston with a more accurate idea of the inequalities present in Lewiston, River Valley Village, and Hillview.

Additional demographic information to collect in future studies include: the number of adults and children, race, gender, ethnicity, age, disability status, education level, average income, employment status, car ownership, time of tenancy, and participation in food assistance programs. We also inquired about family structures of households such as single parent, two parents, and alternative guardians. Other information desired included: qualifications and eligibility for Section 8 Housing and the public and private housing complexes; the waiting list, acceptance rates, location, and number of available units of each housing type. Much of this information was not collected due to time constraints and lack of documentation by the housing complexes. It would be very helpful to gather this information in the future.

We were unable to use some of the demographic data that we gathered because we lacked comparable information for the three populations. This included our unemployment rates and income. Also we were missing family composition information for River Valley Village and SNAP/food assistance usage for Hillview.

Future research should include more representative interviews with heads of households at both housing complexes and the Section 8 Housing Units. Further, focus groups could be helpful to gain more widespread interviews across the populations at the housing complexes, as well as more interviews with people of color and Somali refugees. More thorough demographic data could also help extrapolate these findings to both populations and more conclusively determine the prevalence of food insecurity within these groups and so help Local Food for Lewiston in their mission to help Lewiston residents.

Appendices

Appendix A

Hillview, Lewiston Public Housing Complex Questions for Shari LeTourneau

1. What are the requirements for living in Hillview and Section 8 Housing apartments and is there any difference in qualifications for Hillview and Section 8 Housing Units?
2. How many families get Section 8 and family housing vouchers?
3. What is the acceptance rate out of the total applicants for these housing units?
4. How long is the waiting list for both?
5. How long are families allowed to live in the Hillview Housing Complex and Section 8 Housing Apartments?
6. Could we find out generally where Section 8 Housing Apartments are located?
7. How many units are available for the public in Hillview and within the Section 8 Housing Apartments?
8. Do you have demographic data concerning number of adults and children living in these housing units, race, gender, ethnicity, age, disability status, level of education, citizenship status, employment, car ownership, how long they have been there, average income, level of benefits they receive, and participation in food assistance programs?
9. Do you have information about the family structures of each household? (single parent, two parents, alternative guardians, etc).
10. If you do have that information, is there an electronic version of the dataset that you can send us? If so, is there information about the context of each variable or section of the data?
11. Can you put us in contact with heads of households?

River Valley Village Interview Questions for Tina McBride

1. What are the requirements for living in River Valley Village?
2. What is the acceptance rate out of the total applicants for these housing units?
3. How long is the waiting list?
4. How long are families allowed to live River Valley Village?
5. How many units are available at River Valley Village?
6. Do you have demographic data concerning number of adults and children living in these housing units, race, gender, ethnicity, age, disability status, level of education, citizenship status, employment, car ownership, how long they have been there, average income, level of benefits they receive, and participation in food assistance programs?
7. Do you have information about the family structures of each household? (single parent, two parents, alternative guardians, etc).
8. If you do have that information, is there an electronic version of the dataset that you can send us? If so, is there information about the context of each variable or section of the data?
9. Can you put us in contact with the heads of households?

Appendix B

River Valley Village Questions for Heads of Households:

· **Accessibility** (Can you get to stores)

1. How many adults (18 and older) and how many children live within your household?
2. Does anyone over 65 live within your household?
3. Where did you grow up?
4. Where did your parents and grandparents grow up?
5. How long have you been in Lewiston?
6. How long have you been in the Country?
7. How does your diet compare to the food you would traditionally eat?
8. What is the primary language spoken in the home?
9. Do you feel you have access to adequate nutritional food?
10. Are there any challenges you face in accessing your food? For example, language, hours of operation, transportation, lack of information, discrimination?

Availability (Do stores exist)

1. What is a typical meal in your household (breakfast, lunch and dinner)? Where do you eat?
2. Who do you eat with?
3. Where do you get your food? (ex. super/farmers/corner market)
4. Do you have the opportunity to participate in community gardens, other food production activities, or cook with community members?
5. What do you like and not like about the different places you buy food?
6. Do you own a car?
7. What are the means of transportation to buy food?
8. Do you use any food assistance programs?
 - a. If so, how did you find out about them?
 - b. What do you like and not like about the food assistance program and can you suggest anything that might improve it? Example: (food stamps, food pantries, soup kitchens, Women Infant and Children (WIC), or the free and reduced lunch program)

Affordability

1. Are you aware of how much money you spend on food?
 - a. What proportion of your income goes towards purchasing food?
2. How much money do you spend on groceries weekly?
3. What do you do to stretch your food dollars?
4. How often do you shop for food? How much do you buy at once?

Perceptions and Motivations

1. What does food mean to you?
2. How would you describe your relationship to food?
3. What do you think about your own ability to improve your situation?
4. How would you recommend improving access to nutritious food?

Appendix C

Informed Consent Form

The aim of this project is to examine demographic data from the subsidized housing complexes and collect personal stories of how families deal with the challenges of food insecurity. We also plan to examine the use of government sponsored food programs in schools and collect quantitative data about participation in the programs. We plan to investigate the gaps between who qualifies for free and reduced lunches and how many of these people take advantage of the program.

I, _____ have read the aforementioned description of the study to be conducted by Adam Agins, Robert Little, Erin Bourgault, and Rebecca Dugan, students in the Bates College Environmental Studies Program.

I hereby consent to participation in this study and understand that this interview can be used by Bates students, faculty, and the Local Food for Lewiston program to inform their efforts. I understand that quotes may be used from this interview and the information I reveal will not remain private.

I understand that these interviews will not be anonymous and my name will be used.

I understand that I have a right to withdraw from interviews at anytime if I feel uncomfortable.

I understand that if I have additional question that may not be answered by the researcher, I may contact the advisor, Sonja Pieck at 786-8206 or spieck@bates.edu, or Holly Lasagna at 786-8319 or hlasagna@bates.edu

I consent to my name and/or affiliation being used final report. Y ___ N ___

Signature of research participant _____ Date _____

Appendix D

Table 1: Lewiston demographic data from the 2006-08 census data

	Estimate	Percent
Total Population	36,651	
Male	17,906	48.90%
Female	18,745	51.10%
Median Age	37	
17 years and under	7,569	
18 years and older	29,082	
65 years and over	5,837	
Race alone or in combination with one or more other races		
White	33,092	90.30%
Black or African American	3,381	9.20%
American Indian and Alaska Native	3,099	8.50%
Asian	254	0.70%
Hispanic or Latino (of any race)	696	1.90%
Household by types		
Total Households	15,351	
Family households with children under 18 years	3,891	
Married-couple family with children under 18 years	2,044	
Male householder, no wife present, family with children under 18 years	484	
Female householder, no husband present, family with own children under 18 years	1,363	
Nonfamily households	6,442	
Education Attainment in population 25 years old and over	24,201	
Less than 9th grade	2,902	12.00%
9th to 12th grade, no diploma	2,104	8.70%
High school graduate (includes equivalency)	9,707	40.10%
Some college, no degree	4,538	18.80%
Associate's degree	1,698	7.00%
Bachelor's degree	2,497	10.30%
Graduate or professional degree	755	3.10%

Birth Place		
Total Population	36,651	
Native	34,163	93.20%
Born in the United States	33,887	92.50%
State of residence	24,779	67.60%
Different State	9,108	24.90%
Foreign Born	2,488	6.80%
US Citizenship Status of foreign-born population	2,488	
Natural U.S.	705	28.30%
Not a U.S. citizen	1,783	71.70%
Vehicles Available		
Occupied housing units	15,351	
No vehicles available	2,448	15.90%
1 vehicles available	6,634	43.20%
2 vehicles available	4,651	30.30%
3 or more vehicles available	1,618	10.50%
Commuting to Work		
Works 16 years and over	16,773	
car, truck, or van--drove alone	12,346	73.60%
car, truck, or van--carpooled	2,078	12.40%
Public transportation (excluding taxicab)	133	0.80%
Walked	1,184	7.10%
Other means	416	2.50%
Worked at home	616	3.70%
Mean travel time to work (minutes)	19.5	
Employment Status		
Population 16 years and over	29,554	
In labor force	18,446	62.40%
Civilian labor force	18,403	62.30%
Employed	17,053	57.70%
Unemployed	1,350	4.60%
Armed forces	43	0.10%
Not in labor force	11,108	37.60%

Income and Benefits (in 2008 inflation-adjusted dollars)		
Total Households	15,351	
Mean household income (dollars)	48,855	
Households with cash public assistance income	1,563	10.20%
Mean cash public assistance income (dollars)	2,938	
Families	8,909	
Mean family income (dollars)	52,968	
Percentage of families and people whose income in the past 12 months is below the poverty level		
All families		17.70%
With children under 18 years		33.90%
Married couple families		8.60%
With children under 18 years		18.40%
With female householder, no husband present		56.50%
With female householder, no husband present, and with children under 18 years		63.00%

Appendix E

Table 2: Demographic data of Hillview residents.

	Total	Percent
Total Population	613	
Male	275	
Female	338	
17 years and younger	331	54%
18 years and older	282	46%
Average age	22	
Max age	86	
Total number of housing units	188	
Total number of units occupied	178	94.60%
Vehicles Available for families		
No vehicles available		32%
1 or more vehicles		68%
Race alone or in combination with one or more other races		
White	251	41%
Black or African American	343	56%
Asian	6	1%
Hispanic or Latinto (of any race)	12	2%
Disability Status	67	11%
Employment		36%
Unemployed		64%
Avg length of Tenacy	Just under 4 years	
Avg TANF (per month)	\$611	
Avg rental income (per month)	\$1,007	
Avg Social Security benefit (per month)	\$700	
Avg Disability benefit (per month)	\$523	
Single parent families		39%
Total number of people living alone	43	
Length of waitlist of public housing 2+ bedrooms	1-2 years	

Appendix F

Table 3: Demographic information for River Valley Village.

	Total	Percent
Estimated Total Population	1000	
Known population	846	
Male	371	45%
Female	455	55%
18 years and younger	400	47%
19 years to 61 years	382	45%
62 years and older	64	8%
Ethnicity		
White	338	40.00%
Black or African American	400	47.00%
Asian	29	3.40%
Declined	79	9.33%
Total Number of apartments	297	
Acceptance rate		40%
Vehicles Available for families		
No vehicles available	45	15%
1 or more vehicles	252	85%
Percent participation in food assistance program	970	97%

Reasons resident sought work development assistance to date		
Childcare	9	
Scheduling	4	
Lack of Money	27	
Disabled	2	
Motivation	11	
Need Guidance	6	
Need More Skills	5	
Unaware of resources	6	
Job Search Help	2	
Independence	2	

Appendix G

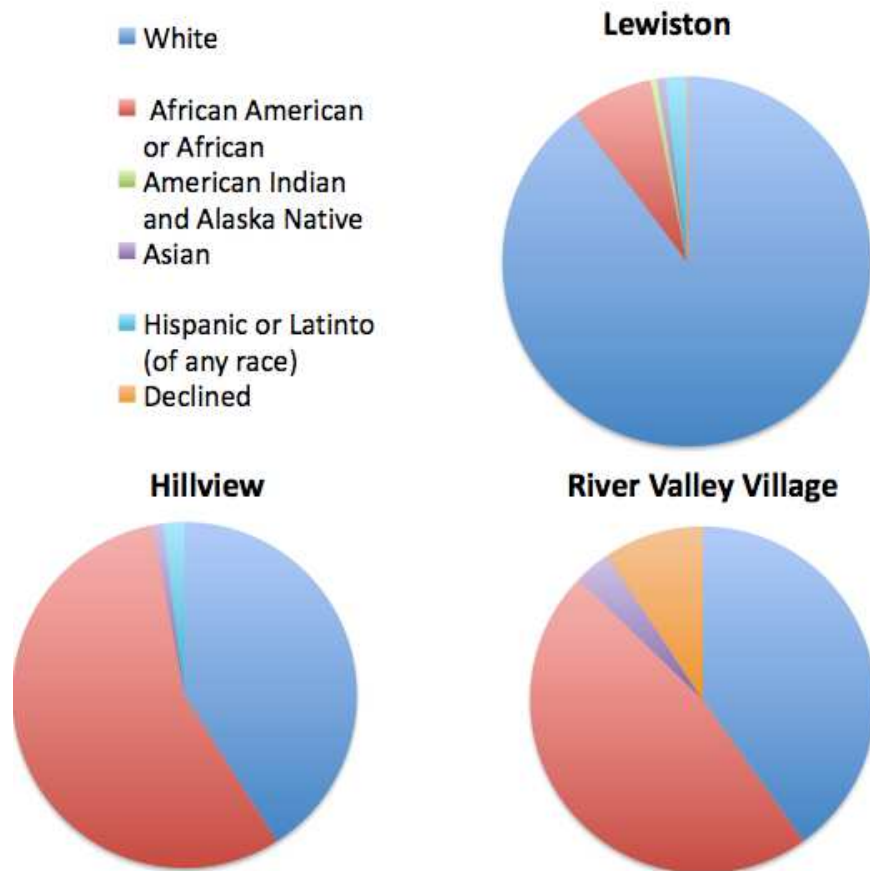


Figure 6: Ethnic distribution within Lewiston (U.S. Census Bureau 2008), River Valley Village (Tina McBride 2010) and Hillview (Shari LeTourneau 2010).

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