How Far Would You Drive for Fresh Food? How Some Rural New Hampshire Residents Navigate a Dismal Food Landscape

JENNIFER J. ESALA

This brief reports the experiences of eighteen rural New Hampshire mothers with young children trying, and often struggling, to secure healthy, affordable, and quality foods. Thirty-five million Americans, including seventeen million children, do not have enough food to eat.¹ Lack of access to food stores with healthy and affordable food is one of the central obstacles to eradicating hunger in America, and approximately 23.5 million Americans live more than a mile from a supermarket, which makes accessing healthy food more challenging.² Among low income populations, especially those with young children and limited transportation, this distance can severely limit access to affordable and healthy foods.³

Background

The real impact of food insecurity is felt by children. Children depend on their guardians, the government, and schools to make decisions about food for them,⁴ and food insecurity has devastating and lasting consequences for children. When children are denied important nutrients at key developmental stages, the physical, psychological, and social consequences are lasting.⁵ Food-insecure children are sick more often than food-secure children and have greater odds of being hospitalized. They more frequently have iron deficiencies, stomach aches, and colds. They score lower on standardized math tests and are more likely to repeat grades. They have weaker social skills and have more difficulty getting along with peers. They also demonstrate lower overall physical functioning.⁶

Rural areas are significantly more likely to meet the conventional definition of “food deserts” (see the Key Definitions box) and to have food-insecure populations.⁷ The low population density and economic decline of many rural areas, as well as the long distances between food stores, contribute greatly to food insecurity.⁸ One study found that

Key Findings

- The availability, cost, and quality of healthy foods varied widely by food store and geographical location. Those interviewed with lower incomes were most severely impacted by the limited selection, low quality, and intermittent availability of fresh foods.
- Berlin and Gorham residents eat fruit, vegetables, and salad less frequently than the rest of New Hampshire.
- Single mothers in rural locations are less frequently able to afford the amount of food they would like, a balanced diet, or healthy foods.
- Those interviewed in Gorham and Berlin said the quality of the available produce strongly influenced their shopping, cooking, and eating habits.
- To secure higher-quality foods, many travel up to an hour to buy their groceries, shop at multiple food stores, or grow their own produce. These efforts were severely limited when families lacked access to transportation, financial means, spousal support, or free time.
- Alternatives to fresh produce included buying frozen and canned produce, or only buying robust produce, such as potatoes and onions.
- Having a supportive spouse is one of the most important factors in reducing stress associated with family meal preparation and maintaining healthy family diets. This highlights yet another way that single parents and their children are at a disadvantage.
- School lunches were a vital source of affordable food for families—although many said the nutritional value of these meals was lacking.

only one-quarter of rural food stores stock food that meets the USDA's *Dietary Guidelines for America*.⁹ Another study found that rural residents pay more for comparable items and have less selection than their urban counterparts. The same shopping list that costs \$85 for rural residents, for example, costs \$55 for urban residents.¹⁰ Overall, children, rural residents, and the poor are disproportionately affected by food insecurity and disproportionately bear the burden of diet-related illness.

Increasing Food Security

Researchers have identified four key elements for ensuring access to healthy, affordable food:¹¹

1. Convenient physical access to grocery stores and other retailers that sell a variety of healthy foods
2. Prices that make healthy choices affordable and attractive
3. A range of healthy products available in the marketplace
4. Adequate resources for consumers to make healthful choices, including access to nutrition assistance programs to meet the special needs of low-income Americans

While all these factors are important, this study indicates that even when healthy foods are available, those foods must be of sufficiently *high quality* for families to integrate them into their meal planning. When families do not have access to quality, healthy foods, they are less prone to purchase, prepare, and consume those foods.

Methods

For this study, I interviewed residents in two northern New Hampshire towns: Gorham and Berlin. I selected these towns, in a large part, because they are geographically isolated towns that are more densely populated than the neighboring townships, and they have a recognizable food infrastructure (such as offices for government food support services, a supermarket, two grocery stores, food banks, and so forth). Accordingly, these towns serve as important and concentrated food centers in Coos County. The food infrastructure in Gorham and Berlin supports nine neighboring towns.¹²

I interviewed eighteen families with children under age 18, and eight food administrators in Gorham and Berlin. I also conducted a "market-basket" analysis of the cost of several core and widely accessible healthy foods at the two grocery stores and the one supermarket in these towns.¹³ Additionally I completed secondary analyses of 2009 data collected at the Carsey Institute (Stracuzzi and Ward 2010) and 2007 data from the Centers for Disease Control (CDC).

I interviewed food administrators—including school superintendents, afterschool food program coordinators, government food program officials, and local food business entrepreneurs—in person. Food administrators contacted area mothers to request their participation in the study.

Interviews with the mothers focused on grocery shopping, food preparation, and children's diets.¹⁴ Slightly more than one-half of the parents lived in Berlin. All were white and the average age was 40. The average number of children was 2.7, and the average number of children under age 18 was 2.2. The per capita income among these families was approximately \$11,600.

Berlin (pop. 9,556) and Gorham (pop. 2,798) neighbor one another; Berlin is much more urban than Gorham. The interviewees agreed that Gorham residents were generally more financially secure and Berlin has been more negatively affected by mill closings. This economic distinction is evident in the data presented in Table 1. By many measures, New Hampshire fares well compared with the nation at large (see Table 1). However, Berlin and Gorham are, by those same measures, worse off than both New Hampshire and United States residents overall. Berlin is particularly disadvantaged. Per capita and household incomes are lower. Fewer Berlin residents have a four-year degree. Berlin has higher rates of child poverty (see Table 1). Indicators, including their rural locations, low-income populations, and high childhood poverty rates, suggest families in the two communities are at high risk of being food-insecure.

TABLE 1. GORHAM AND BERLIN RANK LOWER ON MANY INDICATORS COMPARED WITH NEW HAMPSHIRE AND THE UNITED STATES OVERALL

	U.S.	NH	Gorham	Berlin
Population	---	---	2,798	9,556
Individuals per square mile	---	---	87.7	155.5
Square miles	---	---	31.9	61.5
Median age	35.3	37.1	45.6	42.5
Percent white	75.1%	96%	97.3%	98.2%
Percent with a disability	19.3%	16.9%	25.2%	28.4%
Per capita income	\$21,587	\$23,844	\$16,649	\$15,780
Median household income	\$41,994	\$49,467	\$32,350	\$29,647
Percent with a BA or more	24.4%	28.7%	13.4%	6.7%
Miles from nearest interstate	---	---	35 miles	43 miles
Percent of population under age 18	25.7%	25%	21.2%	21.3%
Percent in poverty with children under age 18	---	6.5%	8.6%	14.9%
Percent of female-headed households in poverty with children under 18	---	23.5%	31.6%	39.6%

Source: Census 2000 Data

Affording Healthy Foods in Northern New Hampshire

Healthy, fresh foods are typically more expensive than less healthy, prepackaged foods, and the mothers I interviewed were well aware of this fact. Almost all families discussed balancing the price and the healthfulness of foods. Figure 1 highlights the challenges faced by rural single-parent families in securing healthy food, particularly families in northern New Hampshire. For instance, while nearly 40 percent of New Hampshire residents feel healthy foods are affordable, only 20 percent of single parents in northern New Hampshire think healthy foods are affordable. The differences are explained by a lack of a second income among single parents and the added expense of quality, healthy foods in rural areas.

FIGURE 1. SINGLE PARENTS IN NORTHERN NEW HAMPSHIRE ARE MOST AT RISK FOR FOOD INSECURITY

Source: Secondary analysis of data collected for the Stracuzzi and Ward brief, "What's for Dinner? Finding and Affording Healthy Foods in New Hampshire Communities" (Carsey Institute, 2010)

In part because of costs and in part because of accessibility, eating a healthy diet is more difficult for residents of Berlin and Gorham than residents in the remainder of New Hampshire, as Figure 2 reveals. Those in the Berlin/Gorham area are less likely to eat fruit, vegetables, or salad than are those in the rest of New Hampshire. Twice as many in Berlin/Gorham never eat fruit, for example, and nearly twice as many never eat salad or vegetables.

Key Definitions

Food Security: Access by all people at all times to enough food for an active, healthy life. Food security includes at a minimum: (1) the ready availability of nutritionally adequate and safe foods, and (2) the ability to acquire acceptable foods in socially acceptable ways.

Food Insecurity: Limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.

Hunger: The uneasy or painful sensation caused by a lack of food. The recurrent and involuntary lack of access to food. Hunger may produce malnutrition over time. Hunger is a potential, although not necessary, consequence of food insecurity.

Food Desert: an area in the United States with limited access to affordable and nutritious food, particularly areas composed of predominantly lower-income neighborhoods and communities.

Supermarkets have been defined as "having more than \$2 million in gross sales annually and typically belong to a larger chain and offer a full range of foods."¹⁵

Grocery stores are much like supermarkets, but have "less than \$2 million in annual sales." Grocery stores tend to have fewer fresh foods, less variety, and higher prices than supermarkets.¹⁶

Specialty stores stock a select number of foods, such as cheese, seafood, or candy. Thus, the healthfulness of these stores depends on the type of food in which they specialize.

Federal National School Lunch Program operates in more than 101,000 public and nonprofit private schools and residential child care institutions. It provided nutritionally balanced, low-cost, or free lunches to more than 30.5 million children each school day in 2008.¹⁷

Food support programs include Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children program (WIC), food kitchens, and food pantries. Government food assistance programs provide food benefits to at-risk populations.

*Source: National Center for Health Statistics and the U.S. Department of Agriculture

FIGURE 2. BERLIN RESIDENTS ARE MUCH LESS LIKELY TO EAT FRUITS AND VEGETABLES

Source: Secondary analysis of 2007 CDC food data (as used in Stracuzzi and Ward 2010). The unit of analysis is a Hospital Service Area (HSA). The Berlin HSA encompasses seventeen towns in Coos County, including Berlin and Gorham. Berlin and Gorham encompass approximately 80 percent of the population in the Berlin HSA.

Varieties of Food Sources

To explore more fully the impact of cost and quality of food, I examined several types of food stores in Gorham and Berlin, including supermarkets, grocery stores, convenience stores, specialty stores, school food programs, and food support programs. I focus on supermarket and grocery stores in the two towns given that these are the most reliable and cost-effective sources of healthy foods. The main stores were the local IGA, Wal-Mart (supermarket), and Save-a-Lot.

IGA is an independent, locally owned grocery store in Berlin located at the edge of downtown. Those who are physically able and live in downtown Berlin can walk to IGA. The quality of the food is considered relatively high, especially the meat, but the prices are also considered high and selection is limited. Because of the price and limited selection, only three of the interviewees shop for the majority of their groceries at the local IGA. As one resident put it, “I go to IGA because they have a better selection of meats or I will go if I just need a gallon of milk and I don’t want to go all the way to Wal-Mart.”

Those interviewed frequented Wal-Mart Super Center the most among the stores. It is the only supermarket in the area. Although Wal-Mart was the most popular store when measured by the number of respondents who shopped there, it was also the most disliked. The quality of the produce and meats were considered exceptionally low, the prices were cited as steadily increasing, and many of the interviewees believed the store squashes competition that might keep prices low. Despite the general distaste for the company, more than one-half of the interviewees reported doing the bulk of their

grocery shopping at Wal-Mart. They cited the convenience of doing all of their shopping in one place, the variety of nonperishables, and the low-prices of generally expensive non-food grocery items, such as paper towels, dish soap, and diapers.

Many, however, said things like “I don’t want to just depend on Wal-Mart for everything.” As a result, many residents shop at Save-A-Lot, a discount grocery store. Those interviewed said the prices were the lowest in the area. However, the market-basket analysis (see Figure 3) indicates that the prices of healthy staples are comparable to Wal-Mart. The quality and selection of produce at Save-A-Lot are considered by the interviewees to be very low. However, once a month Save-A-Lot receives shipments of meat that many of the interviewees indicated were high quality at a low price. About one-third of the interviewees do the majority of their grocery shopping at Save-A-Lot for the low-prices and as an alternative to patronizing Wal-Mart.

Interviewees lamented the 2009 closing of Shaw’s supermarket in Gorham. Some interviewees expressed anger that Wal-Mart put Shaw’s out of business only to then increase prices and reduce the quality and selection of their food. Shaw’s was touted as having high-quality produce and meat with good variety, though the prices were still considered too high by many of the interviewees. As one mother of five who primarily shops at Save-A-Lot explained, “There is no way I would have shopped at Shaw’s, with this many people in the house . . . it was too expensive.” After Shaw’s closed, two of those interviewed said that they decided to shop an hour away in Conway in order to find better prices and higher-quality foods.

The market-basket analysis indicates the prices of food in the three major shopping outlets based on the price of: high fiber bread (>2g.), 1% and skim milk, carrots, apples, broccoli, lean chicken, lean beef, canned tuna and salmon, roasted or smoked turkey or chicken, and a dozen eggs. As Figure 3 shows, Save-A-Lot has the lowest prices, although Wal-Mart’s prices are comparable. IGA, as the interviewees indicated, had the highest prices.

Fundamental Problems with the Berlin/Gorham Food Landscape

Overall, the people interviewed were very disappointed in the quality, high price, and lack of variety of fruits and vegetables in their community. The freshness and quality of produce is a nationwide problem, but research shows that areas with few grocery outlets are particularly vulnerable to sub-par produce. In addition, because of their isolation, these areas require food to be transported long distances, increasing the risk to perishable food.¹⁸ It has been estimated that one-third of all produce is spoiled before it makes to the consumer.¹⁹ Nearly all of those interviewed also said that poor-quality, often spoiled, produce was a serious problem

FIGURE 3. THE COSTS OF A TYPICAL “MARKET BASKET” OF FOOD IN GORHAM AND BERLIN

for them. As one mother complained, “The produce is awful. It is never fresh; I picked up a cucumber yesterday and I could stick my finger right through it. It’s gross.”

Further, the interviewees felt they had very few opportunities to seek out quality produce. A few would travel upwards of one hour to find grocery stores with quality produce, but this was the exception. Most interviewees indicated that they would instead (1) choose not to buy produce, (2) buy frozen produce, or (3) buy only robust produce, such as potatoes and onions. As one interviewee explained, “We have to select from what they have, so I usually end up doing . . . frozen food. There is just less and less choice.”

The lack of access to affordable and quality produce at worst severely limits consumption and at best presses individuals to consume poor-quality produce. In addition, food assistance programs, intended to fill the gap in food for those in need, also struggle to secure quality fresh produce. A food pantry coordinator said that fresh produce is rarely donated and thus is rarely available, and does not last long when it is available. Another food pantry coordinator explained, “People want the fresh food if they can get it.” It just isn’t available.

The majority of the interviewees felt that the meat selection was limited, that its quality was low, and its prices high. As one interviewee explained, “The meat . . . when you open up a package from Wal-Mart, it smells rotten, but it’s not rotten; it just has a different smell than fresh beef.” In contrast to produce, some community members were able to buy quality meats at specialty stores, although this quality comes with a steep price. Five interviewees with “higher” incomes²⁰ indicated that they shop at specialty stores in addition to their primary food store. However, none of those with lower incomes did so. Those who did shop at the specialty stores were well aware of the price of doing so, as this mother said:

We do have the meat market [in Gorham]. It offers fresh meat cut to your, the way you want. It is very expensive, very expensive . . . For something for the grill,

we get candy meat, which is marinated meat for your grill. You just throw it on the grill; it’s like \$10 a pound, but it is awesome. That is like a big splurge.

Overall, produce is the most challenging for families to afford—and find. Not one interviewee indicated satisfaction with the quality or price of the produce in the Gorham/Berlin area. The quality of meat was a concern among many of the parents, but those with the resources were able to find higher-quality meat at specialty stores and occasionally at the IGA. These findings suggest that it is not only access to and affordability of fresh foods that shape family eating habits, but the *quality* matters as well.

Coping with Shortages of Quality, Fresh Foods

Families employed a number of tactics to find quality fresh foods, including shopping at multiple food stores, traveling longer distances to find fresh food, growing their own food, and relying on school food programs. They also noted that having a supportive spouse helps alleviate the stress of skimping on food or having to do more with less. Below I describe these coping strategies in more detail.

1. Shop at Multiple Food Stores

One tactic for pulling together healthy meals was to search for quality foods at multiple stores, though with limited success. Many of the respondents reported that none of the stores stocked quality produce. Some of the lower-income families did not have transportation or gas money to regularly shop at multiple stores. Those families with children often did not have the time or energy to complete this ambitious type of shopping. A government food program coordinator discussed the incredible challenge many of her clients face getting to and from even one grocery store without reliable transportation. “The only way that Wal-Mart is accessible for these families is public transportation, which they have to pay money for, and that is expensive when you are shopping with your family. You pay for each person both ways.” She goes on to explain that families limit their grocery purchases because they can only carry so many bags on the bus and have trouble coordinating their families’ schedules with the infrequent bus schedule. In short, going to one food store is challenging for many families. Going to multiple stores? Nearly impossible.

2. Travel to Find Fresh Produce

Another tactic employed to access quality fresh foods at an affordable price was to travel to less-isolated rural areas to do grocery shopping. This often involved traveling an hour or more to Conway. Most of the interviewees who traveled long distances for food only did so monthly or bi-monthly and

would buy in bulk. This tactic, too, has significant limitations. Many of the families simply cannot afford the upfront cost of buying in bulk. Certainly, the cost of traveling an hour each way in mountainous areas is prohibitive for many families, and the reliability of or access to transportation also poses obstacles. Further, many of the parents have full-time jobs and children, which limit the amount of time that they can invest in shopping. For single parents, these obstacles are compounded, as financial resources and social support, particularly for child care, tend to be limited.

3. Grow Their Own Produce

Three families noted that they get at least a portion of their produce from a family garden. This provided food for one to three months during the summer, and these interviewees indicated that gardening provided between two-thirds and 100 percent of their produce for the summer. Of course, this too has limitations, including owning enough land for a garden, time to work in the garden, and the trial and error of growing and storing vegetables.

4. Rely on School Lunches

School lunches were a core component of many of the children's diets. School lunches provide an affordable, cost-effective, and convenient way for families to feed their children. Unfortunately, as of 2005, only six to seven percent of school meals met the USDA nutritional standards.²¹ Although none of the interviewees contested the value of a cheap meal that they did not have to prepare, many noted the nutritional shortcomings of the food. Also, the quality of the food, they noted, varied widely from one school to another. Some parents were simply enthusiastic about the lunches:

They have awesome lunches at his school. His school is very small . . . Every week they focus on a different food. . . . It's all organic and locally grown. He likes it. He actually eats more stuff at school than he does at home [Mother of a Gorham Student]²²

More often, however, parents were unhappy with the quality of the food, as this Berlin mother revealed in talking about her daughter's reaction to the food:

She won't even look at school lunches; she's horrified by them. She actually tried to convince the school board to change the lunches. She said the lunch should at least have food for people like her who don't want glowing white bread, that doesn't want to eat greasy chicken fingers and pizza.

The majority of the parents were less than satisfied with the quality of the lunch, but, as this mother explained: "If they can give us a meal for \$.40, that's alright." And, often, the healthy options were simply not accessible to those with less income, as this food administrator in Gorham said of the school lunches:

I don't think they are great. There's a lot of processed food. They will totally do the pizza, the chicken nuggets, the French toast sticks, egg sandwiches, whatever. . . . They have a salad bar and stuff like that, but it's so flippin' expensive that the kids [with less money] can't access it.

Generally speaking, parents and children were unhappy with the quality of the school lunches but continue to purchase them because the lunches are extremely affordable and time-effective.

5. Spousal Support

Having the support of a spouse was cited by those interviewed as one of the most important factors in reducing stress associated with family meal preparation and maintaining healthy family meals in the context of busy family life. Families with spouses (generally husbands) who were willing to help purchase and prepare foods benefited greatly. Fathers were often asked to pick up food on their way home from work, which limited the cost of driving to and from the grocery store and reduced the burden of bringing children out shopping. Some husbands would take the children to the toy department at Wal-Mart or watch the children at home while the mother shopped. Removing children from the food shopping trips reduced both the cost of impulse purchases and the stress of managing children while shopping for food. When husbands cooked for the family, they most frequently would grill in the summer, help prep food, or make specialty meals. Although the husbands in this study never played a central role in cooking, mothers reported that a helpful husband made the main task of shopping and cooking more feasible, even enjoyable.

The value of being married, even when the spouse is only marginally helpful, is evident in these interviews. Single parenthood clearly places a significant financial and time burden on parents and households. Interviews revealed that, in lower-income families, women reported doing *all* of the grocery shopping and food preparation, while higher-income parents more frequently shared food shopping and preparation duties with their partners.²³ Families with two parents who are both willing and able to help with food preparation appeared to benefit from the subsequently more balanced and nutritious meals.

6. Anticipating a New Source of Produce

A new farmers' market opened in Berlin in July 2010, which gave many of those interviewed hope that they will be able to find quality, affordable produce. Although the interviews were conducted before the market opened, when asked, almost all were excited about having fresh produce available in their area, and most indicated that they planned to visit the farmer's market. Still, many of the families were concerned about the cost of the produce and the difficulty or impos-

sibility of using food-assistance cards (WIC or SNAP) at the market.

In November, a farmers' market coordinator reported that all of the thirty to forty vendors accepted WIC, but only a few each week accepted SNAP. Also, she estimated that 80,000 local dollars were exchanged at the market. Although there was much skepticism among interviewees about the cost and accessibility of the market, it appears the market filled an important food niche in Berlin. Future research should examine the demographics of community members who used the market and the role it played in providing the community fresh foods.

Conclusion

Gorham and Berlin residents interviewed in this study were generally dissatisfied with the variety, accessibility, and quality of the food in their communities. Their rural location limited the range of food stores with higher-quality foods. Lack of transportation, financial resources, and social support further limited the range of quality fresh foods that families could access. Parents who could not travel to buy food and did not have family gardens often went without fresh produce. Subsequently, children in these food-insecure families receive far fewer essential nutrients than children in families with the means to afford quality fresh foods. These families had to make compromises in the types of foods they bought and prepared for their families.

The excitement generated by the new farmers' market indicates an unmet need in the community. Venues that can expand the choice of fresh foods in these areas are greatly needed. New businesses—such as mobile fruit stands or “produce trucks” that travel from area to area selling local produce—might fare well in this type of isolated and rural location. These communities are in great need of these types of innovative ideas. Also, communities may do well to invest more heavily in helping families apply for already established food programs, such as WIC. That families in Gorham and Berlin are forgoing or limiting fresh food owing to a lack of access to affordable and quality foods points not only to the critical importance of food affordability but also to the critical importance of the quality of that food.

ENDNOTES

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10. Treuhaft and Karpyn, “The Grocery Gap.”
11. Barnes, “Solving the Problem of Childhood Obesity.”
12. See Stracuzzi and Ward, 2010, “Access to Affordable Food in New Hampshire” for maps of food stores in New Hampshire.
13. I employ the measures used by Liese et al., “Food Store Types.”
14. Interviews were coded using NVivo8.
15. Liese et al., “Food Store Types.”

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19. Ibid.
20. I divided the interviewees into "lower" and "higher" incomes, with nine interviews in each category. I based this division on the average per capita income in each family interviewed, which was \$11,604, and ranged from \$4,000 to \$33,333. Notably, the average per capita income in this sample falls slightly below the per capita averages in the two towns (Gorham \$16,649; Berlin \$15,780).
21. Barnes, "Solving the Problem of Childhood Obesity."
22. This student's school participates in the Farm to School Program. For more information on the NH Farm to School Program, visit <http://www.nhfarmtoschool.org/>.
23. Arlie Hochschild's work in *The Second Shift* serves as a caution when interpreting these verbal reports. Hochschild found that people's housekeeping practices diverged greatly from the proportion they thought they did. Accordingly, observation may draw a very different picture.

ABOUT THE AUTHOR

Jennifer J. Esala is a doctoral candidate in the sociology department at the University of New Hampshire (jjm36@unh.edu).

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Huddleston Hall
73 Main Street
Durham, NH 03824

(603) 862-2821

www.carseyinstitute.unh.edu