

Community Factors, Dietary Intake, and Health

Retail Concentration, "Food Deserts," and Food-Disadvantaged Communities

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Food retailing in the United States has changed dramatically over the past 20 years. As large food retailers have entered smaller, rural markets, many local grocers have gone out of business, resulting in fewer local food retailers. A "food desert" is an area where residents have limited access to supermarkets and supercenter stores. The term originated in Europe to describe places with few food retailers. U.S. researchers have only recently begun to apply this concept to rural areas in the U.S.

This study used data on food retailers from the 1999 County Business Patterns data from the U.S. Bureau of the Census to develop a measure of U.S. food deserts. In addition, the study described the characteristics of food desert populations, and assessed the impact of food deserts on the consumption of fruits and vegetables.

The authors used Geographical Information System (GIS) technology to identify census blocks in which residents must travel at least 10 miles to access a supermarket or supercenter food retailer, which they defined as low-access areas. A county is designated to be a food desert based on the proportion of its population that lives in low-access areas. The food desert measure was then linked to data from the 2000 Census of Population and Housing to characterize the population of food desert counties.

The study found that food desert counties contain more small grocery and convenience stores than non-food desert counties. Because these stores often sell lower quality groceries at higher prices than supermarkets, food desert residents must sometimes travel long distances to access the quality, low-price groceries available at a supermarket or supercenter. Additionally, food deserts are less likely to have fruit and vegetable markets such as farmers markets. A second key finding was that food desert counties contain a higher percentage of low-income persons, lower median income families, a less-educated population, and higher rates of unemployment.

The authors also used data from the Behavioral Risk Factor Surveillance System to estimate the effect of living in a food desert county on the dietary

intake of Mississippi residents. They found that residents of food deserts are 23.4 percent less likely to consume five or more servings of fruits and vegetables than residents of non-food deserts, after controlling for age, race, gender, and education. In addition, the positive effect of education on consumption of fruits and vegetables is weaker in food desert counties than in non-food desert counties.

The study documented the prevalence and severity of food deserts in U.S. nonmetropolitan areas. Individuals living in food deserts may pay higher prices for groceries, since the greater travel costs incurred to access a large food retailer may not offset the savings available at these stores. Some sources of healthy food, such as fruit and vegetable markets, are less available in food deserts. Thus, living in a food desert may have an impact on the dietary quality of vulnerable segments of the population, including low-income families and the disabled, who comprise a greater share of the population in food desert counties. For these persons in particular, it may be inconvenient to shop at a large food retailer because of travel costs and other constraints.

Study findings indicate that food deserts affect dietary intake. Residents of food deserts experience a greater risk of poor dietary intake. Recent research identifies links between fruit and vegetable consumption and major health problems, such as heart disease, stroke, some forms of cancer, and pregnancy complications. These links underscore the health risks and public health costs associated with poor nutrition.

Nutrition Assessment and Education for the Keweenaw Bay Ojibwa

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Keweenaw Bay Ojibwa Community College established the Nutrition Assessment and Education project to assess the nutritional needs of the Ojibwa people and to examine ways to address these nutritional needs while maintaining traditional tribal nutrition practices. The author initiated the project, in collaboration with other tribal organizations and businesses, in response to the high risk and prevalence of diabetes, heart disease, and other nutrition-related health problems among the Ojibwa people.

The author focused on the members of the Keweenaw Bay Ojibwa community living on or near the L'Anse reservation in northern Michigan on Keweenaw Bay of Lake Superior. About 860 of the 3,550 members of the Keweenaw Bay Ojibwa tribal community live on the reservation. This study provided information on the second year of the nutrition project, in which the project team continued their survey of local food establishment operators and tribal elders living on or adjacent to the L'Anse reservation.

Interviews with elders provided information about their eating habits and their views on eating traditional Ojibwa foods such as wild rice, fish, wild game, and seasonal fruits and vegetables. Many elders reported that they had to stop eating traditional food when they were sent as children to residential boarding schools or orphanages that did not serve these foods. Others who grew up on the reservation reported that they felt they were forced to eat many of the staple traditional foods (venison, bear, and muskrat) too frequently because they could not afford other foods. Therefore, they associated traditional foods with the conditions of poverty in which they grew up. However, over half the elders reported that they would like to eat traditional Ojibwa food at least once per week and over one-fourth reported that they would like to eat it at least once per day.

The nutrition project team gathered information from elders with knowledge of the preparation of traditional foods and of the cultural practices associated with their preparation and consumption. To encourage the Ojibwa people to eat traditional food, the nutrition project produced a cookbook of traditional Ojibwa foods and has encouraged local restaurants and feeding programs to incorporate these foods in their menus.

Assessing the Relationship Between Food Insecurity Events and Food Assistance Programs in Two Different Public Housing Communities

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In spite of the economic growth and relatively low unemployment that characterized the U.S. economy over much of the past decade, food insufficiency and hunger continued to affect certain segments of the U.S. population. This study estimated the prevalence of food insecurity for a sample of housing assistance recipients in Atlanta, GA, and examined how the timing of food stamp receipt influences a household's food insecurity status.

The study compared households in two different types of public housing communities. The first type is a traditional public housing unit that consists of 500 apartment units occupied by eligible low-income families. The second type is a mixed-income housing community, in which a portion of units are subsidized for eligible low-income families and the remainder are available to anyone at market prices. The authors conducted a survey of 322 housing assistance recipients, collecting information on demographic characteristics, income, and receipt of government assistance, as well as information used to determine a household's food security status.

The study found that 52 percent of the respondents were food insecure and 16 percent were food insecure with hunger. The majority of the respondents (61 percent) reported receipt of food stamps and other forms of government assistance (in addition to their housing subsidy) in the month prior to the interview period. Respondents in mixed-income housing units had higher average income, higher employment rates, and were less likely to be food insecure than respondents in traditional public housing communities. It is not known whether the relatively favorable conditions for housing assistance recipients in mixed-income households are a result of the difference in the type of housing assistance or whether households that are most likely to experience better conditions are more able to access mixed-income housing assistance.

The study found that 22 percent of respondent households contained at least one adult who reduced food intake. The survey's items that register reduced food intake included cutting the size of or skipping meals or going without

eating for a whole day because of a lack of money for food at some time during the month before the survey. Among these households, the incidence of reduced food intake was more likely to occur during the fourth week of the month, especially for public assistance recipients. The authors note the need for further research on the timing of the disbursement of public assistance.

Community Capacity and Food Insecurity in the Era of Welfare Reform

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This study examined the strategies used by the State of Mississippi to implement the Food Stamp Program after the passage of the 1996 welfare reform legislation, focusing on how local characteristics affect a community's ability to adapt to new policy requirements and serve its low-income population. The authors used administrative data from the Mississippi Department of Human Services (DHS) and decennial census data over the 1970 to 2000 period. They also conducted interviews with food stamp recipients from two counties in Mississippi and with 44 State- and community-level key informants who were knowledgeable of welfare policy in Mississippi.

Many of these key informants believed that reducing caseloads was a higher priority than increasing workforce participation. They suggested that State policies and practices took a punitive stance against cash welfare recipients, but were more accepting of the receipt of food stamps. They suggested that food stamp participation declined because the State did not clearly communicate the policy changes in public assistance to DHS employees located within State- and community-level offices. In particular, key informants noted that DHS staff did not receive training about the policy changes and that the mass mailing used by the State to inform welfare recipients of policy changes was ineffective.

Key informants also noted that welfare recipients faced numerous barriers to employment, including a lack of available jobs and limited access to transportation and child care for those who could secure jobs.

The authors examined county-level characteristics from Coahoma and Lee Counties in Mississippi. Coahoma County had a poverty rate of 35.9 percent and an unemployment rate of 10.1 percent in 2000. In contrast, Lee County had a poverty rate of 13.4 percent and an unemployment rate below 5 percent in 2000. In Lee County, community-level organizations played a major role in helping clients seek public assistance by linking them to State and other public agencies. Key informants indicated that the high degree of collaboration among local organizations in the county allowed them to better serve the low-income population.