Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.

The FNS Research Corner provides a continuing series of summaries of recently completed and current research conducted by the U.S. Department of Agriculture’s (USDA) Food and Nutrition Service (FNS) in the area of child nutrition. For further information, contact the Office of Analysis, Nutrition, and Evaluation (OANE) at (703) 305-2117. Links to published studies and reports, as well as descriptions of ongoing studies conducted by OANE, are available from the FNS Internet web site at http://www.fns.usda.gov/oane/.

RECENTLY COMPLETED RESEARCH

Analysis of Summer Food Service Program (SFSP) and Food Needs of Non-participating Children

This qualitative study was designed to examine reasons why elementary school children who qualified for free or reduced-price meals during the 2003-04 school year did not participate in the Summer Food Service Program (SFSP) the subsequent summer. The target sample for this study was a non-probability sample of 200 low-income households with elementary school-aged children. Results of the survey cannot be generalized nationwide due to the limited sample size and location restrictions to households in the areas of Miami, FL; Kansas City, MO; Oakland, CA; and Salisbury, MD.

Key Findings

More than half of the parents and guardians in non-participating households were not aware of SFSP sites in their local areas. Of the 55 parents and guardians who were aware of sites but did not send their children, 23 (42%) had chosen a different summer program. The others gave various reasons as to why the SFSP site they knew about did not meet their needs. Households that were not aware of local SFSP sites were more likely than others to be classified as food insecure with moderate or severe hunger. Almost 15% of the households in this group that responded to food security questions were categorized as food insecure with hunger, as compared to about 5% for other households.

Households with children that participated in the SFSP relied heavily on the program to provide breakfast (79%) and lunch (91%) for their children during the summer. Virtually all households with non-participating SFSP-eligible children indicated an interest in their children having access to a summer program that provided breakfast and lunch. When parents were asked what they could do to improve their children’s eating arrangements and what the kinds of food they ate during the summer months, most demonstrated an awareness of food choices that were considered to be healthy and claimed that if they could, they would provide healthier food that were "rich in vitamins," included "more fruit and vegetables," emphasized "baked foods instead of fried," and incorporated "less fast food or junk food."
Most parents and guardians felt their children ate healthier, more balanced meals during the school year than in the summer, or ate at least as well. Less than 20% of parents and guardians thought that their children ate healthier meals during the summer. Most households did not feel that they had access to specific types of food during the school year as compared to summer. Most parents, when questioned in person, believed that their children were fed properly even after the program was over for the summer, and were satisfied with their children’s feeding arrangements even when the program was not in session.

Most households that did not participate in SFSP or were not involved in a program in session indicated that their children ate breakfast and lunch at home. These meals were usually prepared by the mother, some other family member, or extended family member. Over half of the mothers took care of their children themselves when or if they were not participating in the SFSP. Other caretakers included day care centers, summer schools, camps, and individuals known to the family.

**Accuracy of School Food Authorities Processing of School Lunch Applications – Regional Office Review of Applications (RORA) 2005**

As part of a larger effort to examine program integrity issues associated with the National School Lunch Program (NSLP), this study examines the administrative accuracy of SFA (School Food Authority) approval and benefit issuance for free or reduced-price meals based on information provided by households. It does not examine the accuracy of household reporting information on the applications or errors made in counting and claiming. These issues will be examined in a larger, nationally representative study, the NSLP/SBP Access, Participation, Eligibility and Certification Study (see below).

A stratified two-stage cluster sample design was used for the study. With this method, school districts were broken into 28 strata, defined by seven FNS regions and four size categories within each region. In Stage One, two school districts were selected from each stratum using probabilities proportional to size (PPS) methods with replacement. In Stage Two, applications for 50 randomly sampled students were selected within each of the eight school districts for each of the seven FNS regions. A total of 2,762 applications were selected for review. The SFA’s determination of household size, total gross income, and certification status (free, reduced-price, and paid) that the SFA assigned to the selected student was recorded. FNS Headquarters staff reviewed each application and made an independent assessment of household size, total gross monthly income, and certification status, based upon the same information provided on the applications. SFA determinations were compared with FNS’ independent assessments.

Few errors were made on applications that were approved based on the household’s categorical eligibility. One percent of categorically eligible applications were processed incorrectly. All of these were missing an appropriate adult signature. More errors were made on applications where decisions were based on the SFA’s determination of household size and income. SFAs were more accurate in determining household size (98%) than they were in determining monthly income (92%). Common errors in computing household size included not counting or double
counting students as part of the total household size. Common errors in the calculation of gross monthly household income included using the wrong monthly income conversion factor, incorrectly determining the frequency of receipt of household income, and erroneous usage of addition or multiplication.

SFAs made incorrect eligibility determinations for 3.5 percent of students approved or denied on the basis of an application at the time of certification. The percentage of errors is slightly higher (4.2%) for students approved or denied on the basis of income-based applications. Accuracy of meal benefit status was slightly lower than the accuracy of eligibility determination at the time of certification. Meal benefit status was correct for 95.7 percent of the students.

**RESEARCH IN PROGRESS**

The following section provides a brief description of some ongoing FNS research and the current status of these studies.

**The School Nutrition Dietary Assessment Study III (SNDA-III)**

School meals programs have changed considerably since the last two national studies on student diets and meal costs were completed in the 1990’s. As part of USDA’s periodic assessment of the nutritional effects of school meals, this study was designed to update information on four domains of great interest to policy makers: 1) characteristics of the school environment and school foodservice operations; 2) student participation, participant characteristics, satisfaction, and related attitudes toward the school lunch and breakfast programs; 3) nutritional quality of meals offered and served in the school meal programs; and 4) student dietary intakes and the contribution of school meals to these dietary intakes. The last SNDA study, SNDA II, only examined the nutritional quality of meals offered, not as consumed.

The third SNDA study gathers data from nationally representative samples of public elementary, middle, and high schools during the spring of the 2004-05 school year. A total of 405 schools in approximately 135 school districts participated in the study. Data were collected from school officials, students, and parents of students. School food authority (SFA) directors and school foodservice managers were asked to provide data on foodservice characteristics and meals offered. Descriptive information concerning district-level operations and meal service characteristics were collected through telephone interviews with SFA directors. Foodservice managers in sampled schools reported information on foods offered at all breakfasts and lunches during a specified five-day target week. In addition, they identified the types of food offered on an a la carte basis for one day during the target week.

At 300 of the participating schools, a random sample of approximately 2,400 students was selected and interviewed about their food consumption over a 24-hour period. Younger children were assisted by their parents in these interviews. Parents also supplied important background information on household characteristics.
Analysis of the data is currently underway. A full report presenting the results of this study is expected in Fall 2006.

**The National School Lunch and Breakfast Programs Access, Participation, Eligibility, and Certification Study (APEC)**

The National School Lunch and School Breakfast Programs are the foundation of the national nutrition assistance programs that ensure children have access to nutritionally adequate food in the United States. These programs seek to balance competing objectives: 1) to ensure that children and families who receive benefits are eligible; 2) to maintain ease of access for those who are eligible; and 3) to keep the costs and burden of determining eligibility reasonable for both the local educational authority and the families involved.

FNS is undertaking a nationally representative study to provide information about children’s access, participation, eligibility, and certification in school nutrition programs to help Congress and the USDA improve program integrity and ensure that intended recipients receive access to them. This study will look at the application, certification, and verification process to identify reasons that some families do not participate, difficulties they experience in applying, and sources of erroneous reimbursements (both under- and over-payments) due to administrative error, household misreporting, or meal counting and claiming inaccuracies. FNS will use the study results to provide guidance for school districts on how to enhance program administration and target benefits effectively.

Data are currently being gathered from a nationally representative sample of elementary, middle, and high schools. A total of 266 schools in approximately 90 school districts are participating in the study. In-person interviews were administered to more than 3,000 households, and almost 4,500 applications will be reviewed.

A final report is expected in Fall 2007. This report will include national estimates of erroneous payments due to certification errors and meal counting and claiming inaccuracies to meet the requirements of the Improper Payments Information Act of 2002. In addition, estimation models will be developed that will augment the study data with available information from existing data sources to generate updated yearly estimates of overpayments, underpayments, and overall erroneous payments in the school meal programs.

**School Lunch and Breakfast Cost Study II**

Much has changed since the last meal cost study, SNDA I, was completed in 1994. School food authorities (SFAs) have argued that they now are spending more to serve meals that meet the nutritional standards established by the School Meals Initiative for Healthy Children. School nutrition directors have become increasingly concerned that rising labor costs and other factors have made it difficult to meet program requirements within the limits of existing reimbursement
rates. Demands for educational improvement and other mandates have led school districts to minimize subsidies to SFAs. As a result, SFAs increasingly have relied on other sources of revenues, such as a la carte sales, vending machines, and other food sales outside mealtimes, to supplement meal costs.

In light of all these changes, there is a critical need for updated information on the adequacy of federal reimbursement rates. The primary objective of this study is to determine the average cost of producing reimbursable school lunches and breakfasts, including indirect and local administrative costs. The study will utilize a direct measurement approach comparable to the methodology used in SNDA I conducted in 1992-94, which relied on the direct measurement of costs attributable to various SFA activities rather than the use of indirect allocation rules.

A nationally representative sample of 122 school districts was recruited to participate in this study. On-site data collection in three schools per district occurred during the 2005-06 school year. Information was collected to allocate the SFAs’ reported costs between lunch and breakfast production and among reimbursable and non-reimbursable meals.

Review of the SFAs’ final annual financial statements, review of the school districts’ indirect cost allocation, and identification of unreported costs attributable to school foodservice operations will be conducted in Fall 2006. A final report is expected in Fall 2007.