

Student and Parent Perceptions of Barriers to and Benefits of the School Breakfast Program in Southeast Alabama

by

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Abstract

The purpose of this exploratory study was to discover the factors impacting participation in the School Breakfast Program (SBP) for elementary school students in southeast Alabama. Nine focus groups were used to gather qualitative data from two groups: 1) fourth and fifth grade students from southeastern Alabama public schools; and 2) parents and guardians of fourth and fifth graders from these schools. Altogether, six focus groups were with students and three focus groups were with parents and guardians, from a total of five schools. Based on responses from all participants, five major themes emerged to explain why students do or do not participate in the SBP: 1) belief that breakfast is important; 2) dislike of the foods being offered; 3) timing and scheduling; 4) cost of the school breakfasts; and 5) stigma. The issue of costs was a surprising find, with parents stating that although they don't qualify for the free or reduced-price meals, many of them cannot afford it. It appears that the state of Alabama could increase SBP participation by expanding the program to provide meals for all students, regardless of their family's income. This would also aid in addressing the stigma barrier. Improving the palatability and variety of foods offered, as well as providing a means for students who are late to still eat breakfast may increase SBP participation.

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Chapter 1: Introduction

In Alabama, 13.3% of households are food insecure and 1 in 7 Alabamians are enrolled in the federal food stamp program, according to 2008 data (1). Food insecure households may turn to federal nutrition programs to ameliorate their circumstances. One such program is the School Breakfast Program (SBP), a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions (2). The SBP is administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), and at the State level by State education agencies. The SBP was established to ensure that breakfast "be made available in all schools where it is needed to provide adequate nutrition for children in attendance." If they choose to take part in the program, school districts and independent schools receive cash subsidies from the USDA for each meal that they serve. In order to participate, the schools must serve meals that meet Federal requirements, and they must offer free or reduced meals to eligible children.

Only 63% of Alabama's public school children participate in the National School Lunch Program (NSLP), and only 48% of the children participating in the NSLP also participate in the SBP (3). These are startling findings given the many benefits associated with eating breakfast. Consistently eating breakfast has been strongly linked to improvement in school attendance, psychosocial functioning, behavior in school, and math grades (4). Furthermore, there is a strong link between breakfast consumption and positive effects on memory, both long-term and short-

term (5). In addition to the cognitive and academic outcomes, breakfast consumption may also promote healthful body weight. Gleason and Dodd found that the odds of children and adolescents being overweight or obese are 30% lower if they consume breakfast at least five times a week (6). Further, a student that eats school breakfast every day is expected to have a Body Mass Index (BMI) that is 0.75 lower than a student that never eats it, if age, race, and socioeconomic status are otherwise equal. Weight is not the only health benefit of breakfast consumption. Breakfast skipping children have been shown to have higher serum cholesterol levels as well (5). Child and adolescent breakfast eaters are also more likely to meet the Recommended Daily Allowances (RDAs) for micronutrient intakes, specifically with Vitamins A and C, riboflavin, calcium, zinc and iron.

This thesis aims to explore the attitudes of fourth and fifth grade school children and their parents towards the School Breakfast Program in Alabama, and their perceptions of barriers to and benefits of the program. From this information, the phenomenon of SBP participation in public schools in Alabama will be explored. Based on previous research, expected barriers from the students' perspectives were the social stigma attached to participating in the program, a reluctance to arrive at school earlier to participate, and their disinterest in the foods offered. From the perspective of the parents, expected barriers were the social stigma and their belief that meals offered are not of adequate nutritional quality.

Chapter 2: Review of Literature

2.1 Mental and Physical Effects of Breakfast Consumption on Children

The following discussion will describe the impact that eating breakfast has on children's mental health, particularly academic performance, cognitive and memory function and psychological health. It will also discuss the influence of eating breakfast on children's physical health, which will include body weight and overall nutritional status. Lastly, it will cover the current trends of breakfast consumption among children and adolescents.

Academic Performance

Skipping breakfast has been significantly associated with low nutrient intakes in children by several studies (7-12). Children with low nutrient intakes have been found to have lower grade point averages (GPA) and higher rates of tardiness and absenteeism than children from the same schools that had higher levels of nutrient and energy intake (4, 13, 14). Low nutrient intakes are defined as total energy and/or 2 or more micronutrients meeting less than 50 percent of the RDA (4). Because children who skip breakfast have a significantly lower nutritional status than children who eat breakfast, the promotion of breakfast consumption could have a substantial effect on the academic performance of children.

The impact of breakfast consumption on the academic performance of children and adolescents has been widely studied (4, 7, 14, 15). In a study of 6,463 students from grades 5, 8 and 11 in Korea, Kim *et al.* (16) found that the academic performance of the students is

associated with the regular consumption of three meals a day. They also found that students who ate breakfast regularly had a GPA 0.15 to 0.28 points higher than students who did not eat breakfast regularly. In another study, performed in the U.S., children were asked to rate their own performance in school (7). Researchers found that children who skipped breakfast at least once a week were significantly less likely to rate themselves as doing well in school than more regular breakfast eaters. This study included a large (n=14,586) sample of 9-14 year olds. These results are consistent with several other studies, finding that breakfast skippers have lower grades and higher rates of tardiness and absenteeism (4, 9, 10, 15, 17).

Several intervention studies have further explored the impact of providing breakfast at school on the academic performance of schoolchildren. A randomized, controlled study performed in Jamaica found that providing breakfast to children in school resulted in a significant increase in attendance and nutritional status among the children receiving breakfast compared with the students who were not receiving breakfast at school (10). Children in grades two and three who received breakfast also had a significant improvement in math scores. In a study performed in inner city Boston (4), the implementation of a Universal Free School Breakfast Program (USBP) resulted in a significant increase in breakfast consumption, as well as a decrease in absenteeism, increase in math scores, and a non-significant decrease in tardiness. This finding is further supported by a similar study where a USBP was implemented in one Philadelphia and two Baltimore schools (15). Murphy and colleagues found that math scores, absenteeism, and tardiness rates were all significantly related to increased breakfast consumption. These studies, and many more like them (18-20), further demonstrate the association between school breakfast consumption and improved math grades, attendance and punctuality.

The biological mechanism that links breakfast consumption to academic performances has not been established, but it has been hypothesized that it may be due to the meal preventing the body's short-term metabolic response to fasting conditions, thus maintaining a supply of nutrients to the central nervous system (9).

Cognitive and Memory Function

The benefit of breakfast on cognitive function has been studied extensively (10, 17, 21-24). In short-term fasting experiments, with schoolchildren receiving breakfast one morning and not receiving breakfast another morning, it has been found that when children skip breakfast they are less able to distinguish among similar images and have increased errors in comparison to those who consume breakfast (17, 24). The incidence of errors increased as their blood glucose levels dropped. In this same study, the researchers performed the same tests in Peru, using both well-nourished and undernourished boys ages 9-11. They also found the children to have slower memory recall when they did not receive breakfast, with these effects being higher in the children who were undernourished than those who were adequately nourished. These findings have been supported by other studies as well (10, 21)

In one study in Spain, 180 children from a non-poverty area, and therefore assumed to be adequately nourished, had their breakfast habits recorded for 7 days and compared to standardized test scores (22). The researchers found that habitually consuming an inadequate breakfast (less than 20% of daily energy intake) was associated with poorer test scores on standardized tests of mental functioning, and poorer logical reasoning in the test. This was one of the first studies to demonstrate the intellectual benefits of breakfast in a presumably well-nourished population. These studies, as well as several others (21, 23-25), support the belief that

attention and memory processes are especially vulnerable to the metabolic changes that occur during fasting.

It is not just the consumption of breakfast that affects a child's cognition, but also the type of breakfast that is consumed. In a study of 29 schoolchildren, ages 9-16, the participants were given a different type of breakfast each day over 4 consecutive days to determine the impact of breakfast consumption and what is consumed on the children's memory (26). The study found that skipping breakfast impairs attention and episodic memory, with this impairment increasing in magnitude throughout the morning. However, when a glucose drink was consumed for breakfast, it did not have any benefits to attention or memory, and even caused a greater initial impairment than skipping breakfast had. When cereals high in complex carbohydrates were consumed, the deficit to attention was reduced by more than half and, for immediate word recall, they were shown to prevent the deficit altogether. Other studies have supported these findings, concluding that consuming a breakfast cereal or oatmeal can increase a number of aspects of well-being, including alertness, cognitive functioning, and spatial and short-term memory (25, 27, 28). These findings suggest that a breakfast of cereal rich in complex carbohydrates can help maintain mental performance in children initially and throughout the morning.

Benton and his associates have published several papers on the effects of blood glucose on memory (29-32). They found that consuming foods with a low glycemic index, complex carbohydrates that break down slowly in the body, for breakfast improves the memory performance of humans (29, 30). In another study, they found a significant association between low blood glucose and better memory (31, 32). The researchers postulate that a breakfast that has a low glycemic index will result in lower blood glucose levels, thus having a positive effect

on memory function in humans. Benton *et al.* tested this theory in a study where children ages 9-13 were given a breakfast with different glycemic index levels each morning, and then performed tested on their cognitive function (29). The results supported their previous studies, with the children who received low glycemic loads achieving better scores on measures of memory.

Mental Health and Behavior

Children with hunger have been shown to be more likely to have behavioral, emotional and academic problems (4, 13, 14, 33, 34). Students with reported low nutrient intakes have more psychosocial problems, reported both by their own reports and by their parents, than students with higher intakes (4, 13, 33). Additionally, they are more likely to have repeated a grade, received special education services, or received mental health counseling, than low-income children who do not experience hunger (14, 34). As previously demonstrated, breakfast consumption has a significant impact on the nutrient intake of children.

Breakfast consumption and its association with mental health have been widely studied in recent years, and a correlation between breakfast skipping and mood has been found by several researchers (23, 27, 28, 31, 35, 36). In a study of 5000 secondary school students, researchers found that a higher depressed mood is associated with less frequent consumption of regular meals for both males and females (35). They also found that students who reported high and moderate levels of depression ate breakfast significantly fewer days each week than students with low levels of depressive symptoms. These findings are consistent with studies using adults, where researchers found a significant relationship between breakfast skipping and depression as measured by the Beck Depression inventory (36, 37).

The relationship between breakfast skipping and negative feeling states has been demonstrated in a number of studies using experimental designs (27, 28, 31). Smith and colleagues performed a study using a ‘separate groups design’ in which 213 schoolchildren either ate a breakfast cereal or no breakfast for 14 days (28). Baseline measures of breakfast consumption and different aspects of reported wellbeing (mental health, cognitive functioning, alertness, physical health, and digestive problems) were recorded, and the same measures were recorded again at day 7 and day 14. The researchers found that breakfast cereal consumption was associated with perceptions of greater alertness, fewer cognitive failures, and lower depression, emotional distress and fatigue. The positive effects of breakfast consumption on mood may last throughout the morning. In an earlier study by Smith *et al.* (27), researchers found that young adults who had breakfast reported a more positive mood one and three hours later in the morning than those who skipped breakfast. However, Benton and colleagues, using an experimental design with 150 female undergraduate students, found that while breakfast and a mid-morning snack led to improved mood, breakfast alone did not two hours after consumption (31).

The type of breakfast and the energy content that is consumed also affects behavior and mood. Wyon *et al.* found that a reduced energy intake at breakfast results in children reporting “feeling bad rather than good” during the morning (23). In another study by Benton *et al.* (29), schoolchildren who consumed a breakfast with a high glycemic index had the ability to sustain attention better, displayed fewer signs of frustration, and initially spent more time on their task when working individually in class than students who ate a breakfast with a low glycemic index. The positive effect of consuming a breakfast with a high glycemic index, rich in carbohydrates, has been demonstrated by other research studies as well (26-28).

In recent years, there has been increased research on providing breakfast to children at school and its impact on the behavior of those schoolchildren (4, 15, 18-20). In one study, the mean child report of depression (CDI) score for children who rarely participated in the School Breakfast Program (SBP) was significantly higher than for children who were classified as sometimes or often participating (15). In the same study, the mean child report of anxiety (RCMAS) score for children who rarely participated in the SBP was also significantly higher than the mean for children who participated sometimes or often. The mean parent report of psychosocial symptoms (PSC) score for children who rarely ate school breakfast was significantly higher than it was for children who ate school breakfast sometimes or often. The study also found that children who rarely consumed school breakfast had an increased likelihood of being hyperactive than the children who ate the school breakfast sometimes or often. Kleinman *et al.* (4) found that when a USBP was implemented, the children who increased their school breakfast consumption also showed improved psychosocial functioning, as self-reported using the Pediatric Symptom Checklist, a standardized measure of behavior problems. In three different states where USBP pilot programs were implemented, researchers found substantial declines in teacher ratings of student behavior problems and a decline in referrals to the office for discipline did show a statistically significant decline (18-20). In the Maryland pilot (19), there was also a statistically significant decline in disciplinary suspensions from the fall before the USBP program started to the first fall of the program.

Physical Health

In addition to the academic, cognitive, and behavioral outcomes, breakfast consumption may also promote a more healthful body weight and better physical health. There is

overwhelming support for the theory that breakfast skipping is related to higher body mass index (BMI) scores and obesity (7, 38-43). In a study of 4,320 schoolchildren from England (39), the participants were asked to report how often they eat breakfast on a 5-point Likert scale, and then their height and weight were measured. Researchers found that overweight children were significantly less likely to eat breakfast every day than children of normal weight, even when they controlled for demographics and other eating behaviors. In a study that used the reported dietary intake of overweight and normal weight schoolchildren, Ortega *et al.* also found that overweight children omitted breakfast more frequently than normal weight children, and consumed lower energy breakfasts when they did not omit it (42). This finding is supported in studies using adolescents as well (43).

Participation in the SBP may have a protective effect against overweight and obesity in children. According to data from the SNDA-III, the odds of children and adolescents being overweight or obese are 30% lower if they consume breakfast at least five times a week (6). Further, a student that eats school breakfast every day is expected to have a BMI that is 0.75 lower than a student that never eats it, if age, race, and socioeconomic status are otherwise equal. Millimet *et al.* (44) used data on children's participation in the SBP from kindergarten to third grade, and also concluded that participation in the SBP can have a positive effect on the weight of children.

Weight is not the only nutritional benefit of breakfast consumption. Skipping breakfast, or consuming an inadequate breakfast, can contribute to a dietary shortage rarely compensated for at other meals (11). Child and adolescent breakfast eaters are more likely to meet the RDAs for micronutrient intakes, specifically with Vitamins A and C, riboflavin, calcium, zinc and iron (5). Breakfast skipping children have also been shown to have higher serum cholesterol levels.

The overall health of the child may be impacted by eating breakfast at school. In a pilot study of a USBP in Minnesota (18), school nurses reported a significant decline in morning visits to their office due to minor headaches and stomachaches after the implementation of the USBP. These findings were replicated in USBP pilot studies in both New York (20) and Maryland (19). Bhattacharya *et al.* (45) also found that participation in the SBP increases scores on the healthy eating index, reduces the percentage of calories from fat, and reduces the probability of low fiber intake. SBP participation also reduces the probability of serum micronutrient deficiencies in vitamin C, vitamin E, and folate, and it increases the probability that children meet USDA recommendations for potassium and iron intakes.

Breakfast Consumption Trends

The prevalence of breakfast skipping in children and adolescents is on the rise, and the negative impact is significant. It is estimated that 10 to 30 percent of children and adolescents in the United State and Europe skip breakfast (5). Siega-Riz and colleagues looked at the breakfast consumption of children and adolescents (46), ages 1-18, in the United States from 1965 to 1991. They found that breakfast consumption had declined in elementary school children from over 95 percent to about 86 percent between 1965 and 1991. For adolescents, the decline was even greater, from about 87 percent to less than 70 percent.

Age and gender both have a significant correlation to breakfast skipping in children and adolescents. Gleason and Suitor (47) used the 1994-1996 Continuing Survey of Food Intake by Individuals (CSFII) to evaluate the diets of school-age children in the United States in the 1990s. They found that the rate of complete breakfast skipping was 8.5% for 6-8 year olds, 14.5% for 9-13 year olds, and 31% for 14-18 year olds. The rates of skipping, when defined as eating less

than 10 percent of the recommended REA, rose to 19.5%, 28.5%, and 47% for the aforementioned age groups. Gleason and Sutor also found that females were more likely to skip breakfast than males in all age groups, with the pattern becoming more pronounced in the teenage years. This finding is supported by other studies (7, 48).

2.2 The School Breakfast Program and Participation in the United States and Alabama

The School Breakfast Program Background

The School Breakfast Program (SBP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions (2). It is administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), and at the State level by State education agencies. Established in 1966 under the Child Nutrition Act as a two-year pilot, the SBP was designed to provide grants that would assist schools in serving breakfast to children that were "nutritionally needy" (49). The original legislation did not define "nutritionally needy," however it did require that first consideration for program implementation be given to schools that were located in poor areas or in areas where children traveled a great distance to get to school. The pilot program was renewed several times before it was given permanent authorization in 1975. When authorized, Congress declared that the program was to "be made available in all schools where it is needed to provide adequate nutrition for children in attendance."

The State educational agency, or the Food and Nutrition Service Regional Office (FNSRO) of the FNS department where applicable, have many responsibilities in the administering of the SBP (50). The State agency is responsible for requiring each school food authority or participating school to develop and file approvals for free and reduced price meals.

Other responsibilities of the State agency include maintaining the records necessary for reimbursement, submitting a final Report of School Program Operations each month in order to receive funds, submitting a quarterly Financial Status Report to FNS on the use of program funds, monitoring school food authority compliance with the food safety inspection requirement, investigating complaints received or irregularities noted, and conducting compliance reviews at schools food authorities.

In order to participate in the SBP and National School Lunch Program (NSLP), schools must operate their meal programs on a nonprofit basis, offer free or reduced meals to eligible children, must serve meals that meet Federal requirements, and must meet *offer versus serve* (OVS) provisions of the *National School Lunch and Child Nutrition Act Amendment* (P.L. 94-105 [1975]) and sub-sequent amendments (P.L. 95-166, 97-35, 99-591) (51). These provisions allow students to make meal choices, as long as the number of items chosen meets the minimum specified by the *as served* standard. OVS is mandatory for senior high school meal programs and optional for the lower grades.

Children qualify for free or reduced meals based on their family's income and the Federal poverty guidelines (2). Children from families with an income at or below 130 percent of the Federal poverty level are eligible for free meals. Children from families whose income is between 130 and 185 percent of the Federal poverty level qualify for a reduced price meal. If the family's income is over 185 percent of poverty, then the meal is provided at full price. However, all meals are subsidized to some extent through both cash reimbursements and the provision of USDA (commodity) foods (51). The Federal poverty guidelines are issued each year in the *Federal Register* by the Department of Health and Human Services (52). They are a simplified version of the poverty thresholds, which are published by the Census Bureau and reflect poverty

population statistics within the United States. **Table 1** shows the Poverty Guidelines for 2011. Additionally, the *McKinney-Vento Homeless Assistance Act* (P.L. 100-77 [1987]), as amended by the *No Child Left Behind Act* (P.L. 107-110 [2001]), states that students who are identified by a school district as homeless or highly mobile automatically qualify for free meals and do not need to complete the full application process (53).

Table 1. 2011 Poverty Guidelines for the 48 Contiguous States and the District of Columbia

Persons in family	Poverty guideline
1	\$10,890
2	14,710
3	18,530
4	22,350
5	26,170
6	29,990
7	33,810
8	37,630
For families with more than 8 persons, add \$3,820 for each additional person.	

Source: *Federal Register*, Vol. 76, No. 13, January 20, 2011, pp. 3637-3638

School districts and independent schools that choose to take part in the program receive cash subsidies from the USDA for each meal that they serve. The subsidies range on a scale that

is based on whether the meal is free, reduced, or regular. Ever since the SBP started in 1966, Congress had authorized it to provide higher federal payments for schools determined to be in "severe need," and this continues to be emphasized (49). A school qualifies as having a "severe need" status if 40% or more of the lunches are served as free or reduced price in the year prior. If a school qualifies as "severe need," then their reimbursement rates are 28 cents higher than the regular reimbursement rates (2). The rate of reimbursement is updated annually on July 1, based on changes in the Food Away From Home series of the Consumer Price Index for All Urban Consumers, published by the Bureau of Labor Statistics of the Department of Labor. The Rates of Reimbursement for the 2010-2011 school year for the SBP are presented in **Table 2**. Schools cannot charge more than 30 cents for reduced price breakfasts, and although they can set their own prices for paid meals, they must be operated as a non-profit program (2).

Table 2. Rates of Reimbursement for SBP for the 2010-2011 School Year

		Non-Severe Need	Severe Need
Contiguous States	Paid	0.26	0.26
	Reduced	1.18	1.46
	Free	1.48	1.76
Alaska	Paid	0.39	0.39
	Reduced	2.06	2.52
	Free	2.36	2.82
Hawaii	Paid	0.30	0.30
	Reduced	1.42	1.75
	Free	1.72	2.05

Source: *Federal Register*, Vol. 75, No. 137, July 19, 2010, p. 41798 (54)

Federal Regulations for Nutritional Quality of School Breakfasts

USDA, through the assistance of State agencies, regulates and monitors the nutritional quality of the meals served, and the schools must meet their regulations in order to participate in the SBP. In November 1994, Congress passed the Healthy Meals for Healthy Americans Act (Public Law 104-448), which required that schools participating in the SBP must serve meals consistent with the *Dietary Guidelines for Americans*. In response to this law, the USDA implemented the 1994 School Meals Initiative for Healthy Children (SMI) (55). SMI formalized the requirement of school breakfasts to provide a minimum of 25 percent of the 1989 Recommended Daily Allowance (RDA) (56) for protein, calcium, iron, vitamin A, vitamin C, and calories. The five nutrients were chosen because of the roles they play in promoting growth and development (55). SMI also required that school meals must be consistent with the 1995 Dietary Guidelines for Americans (57), providing no more than 30 percent of an individual's calories come from fat, and less than 10 percent from saturated fat. The new regulations also encouraged reductions in sodium and cholesterol and an increase in fiber, but no quantitative targets were set. Schools are required to keep menu and production records that show how they have met these standards on a weekly basis (50).

In addition to these dietary regulations, SMI allowed for more flexibility for the school systems in their menu planning and monitoring (58). The four options for menu planning are the Traditional Food-Based approach, Enhanced Food-Based approach, Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP). The Traditional Food-Based approach has been used since the start of the SBP in 1966 and even since the start of the National School Lunch Program (NSLP) in 1946. This approach requires specific food group components in specific amounts for specific age/grade group, and because it does not

have built-in features to account for the Dietary Guidelines requirements, it requires thought in planning. The Enhanced Food-Based approach is the same as the Traditional approach, only there are different age/grade groups and there are increased servings of Vegetables/Fruits and Grains/Breads. NSMP uses USDA-approved computer software to plan meals that when averaged over a school week, meet specified targets for nutrients, calories, and Dietary Guidelines recommendations. When using NSMP, the school can choose to use the age/grade groups of the Enhanced Food-Based approach or to use the software to customize age groups. The Assisted NSMP approach is the same as the NSMP except an outside consultant or other agency performs all of the functions of menu planning and nutrient analysis. Under SMI, the local school food authorities (SFAs) choose which approach to use in menu planning (58). A study completed during the 2004-2005 school year found that 48% of schools used the Traditional Food-Based approach to menu planning, 22% used the Enhanced Food-Based approach, and 30% used NSMP (59). This study, the 3rd School Nutrition Dietary Assessment Study (SNDA-III), included 397 schools from around the United States.

How School Breakfasts Served Measure Up

SNDA-III is a nationally representative cross-sectional study, funded by USDA FNS for the purpose of providing up-to-date information on the nutritional quality of meals served in public schools that participate in the SBP and NSLP (60). SNDA-III was completed during the 2004-2005 school year and the findings were published in February 2009 as a supplement to the *Journal of the American Dietetic Association* (61). According to the SNDA-III, school breakfasts on average do currently meet the 1995 Dietary Guidelines (59). The average school breakfast was found to provide about 25 percent of its energy from total fat and 9 percent of

energy from saturated fat, which fell within the guidelines of no more than 30 percent and 10 percent, respectively. However, less than one-third of the schools offered or served breakfasts that met the SMI requirement for total energy, which is 25 percent of the 1989 Recommended Energy Allowance (REA). Only 23 percent of the schools offered breakfasts that met this guideline, and only 31 percent of the schools served breakfasts that met this guideline. SNDA-III found that for the key nutrient requirements of SMI, more than 90 percent of the schools offered breakfasts that met them and more than 78 percent served breakfasts which met them. Eight in 10 schools were found to offer breakfasts that met the SMI standard for fat, and 7 in 10 schools met the standard for saturated fat. However, when comparing the school breakfasts to the SMI standards, fewer than one in five schools offered or served breakfasts that met with all of the standards.

The 1995 Dietary Guidelines do not give standards for cholesterol, sodium, or fiber, but the 2005 Dietary Guidelines (62) do contain quantitative values for these. SNDA-III included information on these three nutritional values and compared them to the 2005 Guidelines. SNDA-III reported that 94 percent of the school breakfasts offered met with the cholesterol requirement of less than 75mg a day, however sodium and fiber requirements were not being met (59). The requirement for sodium is less than 575 mg a day, which is one-fourth of the daily maximum for sodium (62). Forty-seven percent of schools offered breakfasts that fell within that limit and 36 percent served breakfasts within the limit (59). The requirement for fiber is approximately 6-10 grams a day, which is one-fourth of the daily requirement for children between the ages of four and eighteen (62). Virtually no school met the requirement for fiber with breakfasts offered or served (59). The SNDA-III also determined the leading sources of food energy in school breakfasts, which were grains and breads (37%), milk (27%), and fruit,

mainly 100% fruit juice (13%) (60). The combination entrées and meat/meat alternates accounted for about 15% of the energy provided at breakfast.

In the 2004 *Child Nutrition and WIC Reauthorization Act* (P.L. 108-265), Congress recognized the need to update and revise the Nutrition Standards and Meal Requirements for the school meal programs (51). They mandated USDA to promote consistency with the 2005 Dietary Guidelines and Dietary Reference Intake (DRI). In response to the congressional mandate, USDA has updated some of its materials for food service professionals to include information on the *2005 Dietary Guidelines for Americans*. For example, the Menu Planner for Healthy School Meals (58) includes a description of the 2005 Dietary Guidelines for and guidance on how to implement them in school programs.

USDA requested that the Institute of Medicine (IOM) provide recommendations to revise the nutrition- and food-related standards and requirements for the NSLP and the SBP, to better meet the 2005 Guidelines and the DRIs (51). IOM published their final report and recommendations in 2009, and *School Meals: Building Blocks for Healthy Children* was published in 2010. The report recommended numerous revisions and that more emphasis is placed on revised Meal Requirements rather than on nutrients (51). The committee recommended that FNS adopt standards of menu planning that include increasing the amount and variety of fruits, vegetables, and whole grains, setting a minimum and maximum level of calories, and increasing the focus on reducing the amounts of saturated fat and sodium provided. A single approach to menu planning was also recommended; one that includes a meal pattern plus specifications for minimum and maximum calorie levels, maximum saturated fat content, and maximum sodium content. The committee developed two options for the standards for meals as selected by the student, which differ in the number of food items that may be declined.

However, both of the options include the specification that the student must select a fruit at breakfast for the meal to be reimbursable. Another recommendation was to replace the current Nutrition Standards with Nutrient Targets. The Nutrient Targets encompass 24 nutrients and other dietary components, and are not intended to be used as specific requirements for menu planning or to monitor menus, as is the case with the Nutrition Standards. The committee also recommended a reduction in sodium levels in school meals, however they recognized the difficulty of reducing sodium content without affecting student acceptance and participation, so they recommended this be a long-term project to be completed in 2020. A comparison of the current recommendations to the new recommendations found in the IOM report for school breakfasts is shown in **Table 3**.

Table 3. IOM Changes in Minimum Amounts and Types of Food for Breakfast

	Current Requirement	New Recommendation
Fruit	1/2 cup per day	1 cup per day
Grains and Meat/Meat Alternates	2 grains or 2 meat/meat alternates or 1 of each per day	1.4–2 grains per day plus 1–2 meat or meat alternates per day (Range reflects difference by grade group)
Whole Grains	Encouraged	At least half of the grains to be whole grain-rich
Milk	1 cup	1 cup, fat content of milk to be 1% or less

Source: Institute of Medicine, Reports at a Glance, Comparison of Current Requirements and New Recommendations, 2009 (63)

The last part of the IOM report was in regards to implementation and monitoring of the meal requirements. The committee suggested that to promote change and increase student

participation in the program, the school community must be engaged and students, parents and the community must be involved in the changes. Nutrition education, training and mentoring food service workers, and providing technical assistance are also important factors in implementation and monitoring. The introduction of appealing foods that are lower in sodium and saturated fat with a higher ratio of whole grain to refined grain will require industry involvement. The recommended support from FNS includes: 1) technical assistance for developing and continuously improving menus, ordering appropriate foods (including the writing of specifications), and controlling costs while maintaining quality; and 2) new procedures for monitoring the quality of school meals that focus on meeting relevant Dietary Guidelines, and provide information for continuous quality improvement and for mentoring food service workers to assist in performance improvement. The IOM recommendations were released as a proposed rule on January 13, 2011 (64).

The *2010 Dietary Guidelines for Americans* were announced on January 31, 2011 (65). The 2010 Guidelines include new recommendations with a focus on the obesity epidemic. The new additions to the 2010 Guidelines include a chapter on “The Total Diet” which considers various health-promoting dietary patterns and “Translating and Integrating the Evidence” which addresses the broader environmental and social change needed to support healthy eating. The new Guidelines encourage a flexible approach to a total diet, incorporating individual tastes and food preferences into individual recommendations. Also addressed were eating behaviors (including breakfast consumption) and recommendations to increase plant and seafood consumption. It should be noted that at the time of this thesis being written, no recommendations had yet been made to incorporate the 2010 Guidelines into the SBP.

School Breakfast Program Participation

The School Breakfast Program is currently operating in 85,000 public and nonprofit private schools and residential childcare institutions (66). In Fiscal Year (FY) 2009, 11.1 million children participated in the SBP every day (2). This number is an increase from FY 2000, when 7.5 million children participated, and from the start of the program in 1970, when only 0.5 million participated. These numbers show that participation in the SBP is growing steadily. Research has shown that participation is the most heavily skewed towards children who receive subsidized meals. Of the 11.1 million who participated in FY 2009, 9.1 million received their meals free or at a reduced price. Despite this growth in participation, and the large percentage of meals going towards the children who need them the most, research shows that the SBP is still not reaching enough of the children who need it. In the 2009-2010 school year, for every 100 children receiving free and reduced price lunch, 47.2 received free and reduced price breakfast (67). Also, only 87 percent of the schools participating in NSLP participate in the SBP.

Participation in the SBP also varies across geographic areas, with considerable differences between regions, as well as differences among urban, suburban and rural areas (66). SBP participation is most common in the south, where 49 percent of children who have access to the program participate in it. In comparison, SBP participation in the west is 39 percent, 34 percent in the Midwest, and 31 percent in the northeast. SBP participation is also most common in rural areas that are located out of metropolitan statistical areas (MSAs) (57 percent), with cities and towns having the next lowest participation (41-47 percent), the suburbs still lower (35 percent), and rural areas that are part of MSAs having the lowest participation in the SBP (31 percent).

The SNDA-III attained more information on the demographics of the students who participate in the SBP. They found that in the schools where the SBP is offered, participation is more common among boys than girls, among elementary school children as compared to older children, and among nonwhite children as compared to white children (60). The students who are eligible for free or reduced price meals are more likely to participate than higher income students are. Also, students in rural areas are more likely to participate in the SBP than students who come from urban areas. These findings are important to take into consideration when looking at the SBP in a specific location, such as southeastern Alabama.

In Alabama, 13.3% of households are food insecure and 1 in 7 Alabamians are enrolled in the federal food stamp program (1). Alabama is ranked 7th among the states for the Poverty Rate, and 5th for the Child Poverty Rate (68). In the 2007-2008 school year, 82% of the children who participated daily in the SBP received a free or reduced-price meal. However, only 63% of Alabama's public school children are participating in the NSLP, and only 48% of the children participating in the NSLP also participate in the SBP. Alabama is currently ranked 19th among the states for SBP participation as compared to NSLP participation. Despite these low participation rates, in Alabama, the SBP is very widely available (69). In fact, according to 2008 data, Alabama was the number one ranked state in the country for SBP participating schools as a percentage of NSLP participating schools, serving breakfast at 100.3% of the schools that serve lunch. In other words, more schools participate in SBP than NSLP in Alabama. However, SBP student participation rates do not appear to be affected by SBP availability.

Previous studies have found that the availability of a SBP has an impact on breakfast consumption trends. A study in Bogalusa, Louisiana used a sample with a higher percentage of African-American and poor children than the national sample, and the researchers (70) found

that although breakfast skipping did increase from 1973 to 1978, it significantly decreased after 1981, when the School Breakfast Program was implemented. Bhattacharya and colleagues, using data from the National Health and Nutrition Examination Survey (NHANES), looked at the impact of food insecurity on nutritional outcomes (71). The results showed that poverty is predictive of poorer nutritional outcomes among preschoolers and adults, but not among school-aged children. Researchers believe that this may be because school-age children have the ability to supplement their consumption at school, through participation in the SBP and NSLP.

2.3 Perceived Benefits of and Barriers to Participation in the School Breakfast Program

Despite the many reported benefits of participating in the SBP, participation rates are still low. What the quantitative results cannot tell us is why students are not participating. Qualitative studies are particularly beneficial for exploring the attitudes, beliefs and ideas of how an issue is perceived (72), and can therefore offer insight into how the SBP is perceived by program stakeholders (such as parents, students, teachers, school administrators, and foodservice directors). Many qualitative studies have explored these perceptions, and found several perceived barriers to and benefits of participation in the SBP.

A barrier that is frequently reported by students and parents is the issue of time and scheduling for the SBP. McDonnell *et al.* (73) conducted focus groups throughout Pennsylvania with school administrators, school foodservice directors, parents, and students. Scheduling and timing emerged as critical factors in initiating and promoting school breakfast. These findings are consistent with several other studies (74-79). In a study by Reddan and colleagues (76), students in grades 4, 5, and 6 were surveyed about their perceived barriers to SBP participation, and lack of time was one of two of the most frequently stated barriers. Parents and students

reported inadequate time for breakfast consumption as a significant barrier in other qualitative studies as well (73, 75). The students also reported that they were reluctant to participate in the SBP if it required them getting to school earlier, and thus losing sleep time (76). This finding is supported by studies using student focus groups to explore student perceptions (73, 77). A problem with bus schedules was another common theme in the barrier of timing and scheduling. In a focus group study with immigrant parents of school-age children, researchers found that parents cited buses being late as a major barrier in SBP participation (75). This finding was supported by the study by Reddan and colleagues (76).

Other populations, outside of students and parents, support the identification of timing and scheduling as a barrier to SBP participation. School administrators have noted that problems with timing involved the coordination of bus schedules and the concern that making time for breakfast might require cuts in instructional time (73, 79). In a survey conducted with school administrators, the most common obstacle to SBP participation reported, at 74%, were school buses arriving late (74). Principals also cited buses being late as a major barrier to SBP participation in a study by Lent *et al.* (79). In another study which conducted focus groups with School Nutrition Directors (SNDs) and teachers, researchers found that the most commonly discussed barrier was the time issue, and specifically the students being late and buses arriving right before classes began (78). In one study, food service directors stated that they didn't feel students had adequate time to eat breakfast in the morning (73). This is supported by a school administrator survey that found 40% of school administrators believed there was insufficient time provided for students to eat breakfast (74). The same survey also stated that students' unwillingness or inability to arrive early to eat breakfast was a barrier that 54% of administrators reported.

The type and quality of the food offered is another reason commonly cited for lack of participation. In the focus groups conducted by Greves *et al.*(75), many of the parents felt that the food was of poor quality, including expired milk, with too much processed foods being used and too little fresh fruits and vegetables. They also stated that there was a lack of variety, a lack of hot dishes provided, and that they food did not meet cultural and dietary restrictions. In a study using focus groups, conducted by the National Food Service Management Institute (NFSMI), parents felt that the food was too high in sugar, carbohydrates, and fat, with the quality of the food being poor (80). McDonnell and colleagues had similar findings, with parents showing less support of the SBP if they perceived only foods of low nutritional value were being served (73). They also expressed concern about the children choosing nourishing food options. Interestingly, the students of this study said that they would like a wider variety of foods offered, with a range of nutritional values. James *et al.* also found that the students were unhappy with the food options, with most of the 9th graders, from different areas of Florida, participating in the focus group saying that their dislike of the food was the main reason they didn't eat breakfast at school (77).

The findings of foods offered being a barrier perceived by students and parents is supported by findings with school administrators, teachers, and foodservice directors. In the study by NFSMI, the foodservice directors point out that they also thought the low quality of the meal was a significant barrier in SBP participation (80). However, they also stated that because of limited budgets, they could not do anything to improve that. The same study conducted focus groups with teachers and found that they too believed the food was too high in sugar, carbohydrates, and fat.

Stigma can be a significant barrier to participation in the SBP, according to several studies on perceptions of the SBP (73, 74, 77, 79, 80). In one focus group study, a student was quoted as saying “only poor students eat breakfast at school” (77). Children have also identified the students who participate in the SBP as the “tough guys” and the “detention crew,” showing a negative stereotype that has been attached to eating breakfast at school (73). Both parents and school personnel say that stigma does exist and identify it as an issue that prevents children from wanting to participate in school breakfast. One school official was quoted as saying “they know who’s poor and who isn’t poor” to illustrate the negative stigma of being from a family with low income, and how it is attached to the SBP.

Several other barriers to SBP participation have been identified through focus group research. The belief that breakfast is a parental responsibility could prevent schools from offering breakfast, especially if people in a decision-making position believe this (73). Another problem identified is the cost of implementing a SBP (73). School officials cited the increase in staff hours, which would lead to the increased expense of providing benefits to staff, as being a problem with implementing the program. However, foodservice directors did not consider this to be a major barrier, and even discussed methods for keeping costs to a minimum. The lack of support from school personnel has been noted as a concern with the SBP (74, 80). Foodservice directors discussed witnessing teachers and administrators discouraging kids who pay full price from eating breakfast at school (80), and 49% of administrators surveyed said that a major obstacle to SBP participation is opposition to providing breakfast at school from teachers and administrators (74).

Studies on the perceptions of the SBP have not just helped to identify barriers, but have also identified many benefits of the program. The benefit that is most frequently brought up in

these studies is the social aspect of breakfast at school. In the focus groups conducted by McDonnell *et al.*, this was a benefit that was brought up by not just the students and parents, but also by the school administrators and foodservice directors (73). Both the parents and the students believed that breakfast at school was a great social opportunity, allowing them to relax and talk with friends before the school day started. Other studies have had similar findings, with the socialization between students and their teachers and the cafeteria staff especially being noted as a positive outcome (75, 80, 81). The interaction with cafeteria staff is significant, as it has been shown that as SBP participation increases, students are more likely to give higher ratings to the foodservice staff, showing the growing relationship between them (82). The school administrators believed that eating breakfast at school helped to facilitate interactions between the students and the supervising teachers, in a non-academic setting. The foodservice directors also felt that it led to increased positive interactions between the students and the cafeteria staff (73).

The benefits of breakfast consumption are discussed when talking about perceptions of the SBP, showing that the parents and school employees in all of the studies are aware of the effects of breakfast consumption. Parents, students, and school personnel have said they believe the SBP is beneficial because it provides food to those who need it (80), because it is good for the child's brain and their concentration in school (75), and because it provides them with increased energy and ability to pay attention in school (76). While 37% of school administrators surveyed by the Food Research Action Center (74) believe there is a lack of parent awareness of the academic and behavioral benefits of school breakfast, these qualitative findings show a different view.

The cognition and environment of children and adolescents has been shown to have an impact on breakfast consumption. In a study in the Netherlands (83), researchers found that a child's attitude, perceived behavioral control, modeling by friends and parents, and intention were all significantly correlated with their daily breakfast consumption. The environmental factors that were positively associated with daily breakfast consumption were rules regarding breakfast set by the parents, availability of breakfast products, and socio-cultural factors, such as having breakfast with a parent or eating the evening meal in front of the TV. The presence of parents at the evening meal and rules and guidelines regarding breakfast being set by the parents was also found to be significantly associated with breakfast consumption in a study by Videon and colleagues (48), supporting these findings. A study of children ages 10-14 in Hong Kong also showed the impact of children's beliefs and perceptions on their breakfast consumption (84). The researchers used a survey to find that the main reasons for skipping breakfast was not having enough time, a lack of perceived parental emphasis on breakfast, and not believing that breakfast could help concentration in class were significantly related to breakfast consumption.

2.4 Summary

This literature review explained the importance of the School Breakfast Program and the need for increased participation in the SBP in Alabama. Breakfast consumption has a significant impact on children academically, mentally, and physically. However, there is currently a lack of participation in the SBP amongst students in Alabama. Qualitative research has shown the perceptions of students and parents regarding the SBP, and provides feedback on what steps can be taken to increase participation in those geographical areas. This study explored these issues

and the perceptions of students and parents in southeast Alabama regarding the barriers to SBP participation in their schools.

2.5 Research Questions

The primary focus of this research was to determine the perceptions of students and parents regarding the School Breakfast Program (SBP) in the context of what they perceive as being barriers to and benefits of participation. The following questions were used to help explain this overarching investigation.

1. How do students and parents perceive breakfast consumption?
2. What benefits to participation in the SBP do the students and parents perceive?
3. What barriers to participation in the SBP do the students and parents perceive?
4. In what ways are student perception and parent perception similar and different in regards to the SBP?

Chapter 3: Student and Parent Perceptions of Barriers to and Benefits of the School Breakfast Program in Southeast Alabama

3.1 Abstract

The purpose of this exploratory study was to discover the factors impacting participation in the School Breakfast Program (SBP) for elementary school students in southeast Alabama. Nine focus groups were used to gather qualitative data from two groups: 1) fourth and fifth grade students from southeastern Alabama public schools; and 2) parents and guardians of fourth and fifth graders from these schools. Altogether, six focus groups were with students and three focus groups were with parents and guardians, from a total of five schools. Based on responses from all participants, five major themes emerged to explain why students do or do not participate in the SBP: 1) belief that breakfast is important; 2) dislike of the foods being offered; 3) timing and scheduling; 4) cost of the school breakfasts; and 5) stigma. The issue of costs was a surprising find, with parents stating that although they don't qualify for the free or reduced-price meals, many of them cannot afford it. It appears that the state of Alabama could increase SBP participation by expanding the program to provide meals for all students, regardless of their family's income. This would also aid in addressing the stigma barrier. Improving the palatability and variety of foods offered, as well as providing a means for students who are late to still eat breakfast may increase SBP participation.

3.2 Introduction

In Alabama, 13.3% of households are food insecure and 1 in 7 Alabamians are enrolled in the federal food stamp program, according to 2008 data (1). Food insecure households may turn to federal nutrition programs to ameliorate their circumstances. One such program is the School Breakfast Program (SBP), a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions (2). The SBP is administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), and at the State level by State education agencies. The SBP was established to ensure that breakfast "be made available in all schools where it is needed to provide adequate nutrition for children in attendance." If they choose to take part in the program, school districts and independent schools receive cash subsidies from the USDA for each meal that they serve. In order to participate, the schools must serve meals that meet Federal requirements, and they must offer free or reduced meals to eligible children.

Only 63% of Alabama's public school children participate in the National School Lunch Program (NSLP), and only 48% of the children participating in the NSLP also participate in the SBP (3). These are startling findings given the many benefits associated with eating breakfast. Consistently eating breakfast has been strongly linked to improvement in school attendance, psychosocial functioning, behavior in school, and math grades (4). Furthermore, there is a strong link between breakfast consumption and positive effects on memory, both long-term and short-term (5). In addition to the cognitive and academic outcomes, breakfast consumption may also promote healthful body weight. Gleason and Dodd found that the odds of children and adolescents being overweight or obese are 30% lower if they consume breakfast at least five times a week (6). Further, a student that eats school breakfast every day is expected to have a

Body Mass Index (BMI) that is 0.75 lower than a student that never eats it, if age, race, and socioeconomic status are otherwise equal. Weight is not the only health benefit of breakfast consumption. Breakfast skipping children have been shown to have higher serum cholesterol levels as well (5). Child and adolescent breakfast eaters are also more likely to meet the Recommended Daily Allowances (RDAs) for micronutrient intakes, specifically with Vitamins A and C, riboflavin, calcium, zinc and iron.

This study aims to explore the attitudes of fourth and fifth grade school children and their parents towards the School Breakfast Program in Alabama, and their perceptions of barriers to and benefits of the program. From this information, the phenomenon of SBP participation in public schools in Alabama will be explored. Based on previous research, expected barriers from the students' perspectives were the social stigma attached to participating in the program, a reluctance to arrive at school earlier to participate, and their disinterest in the foods offered. From the perspective of the parents, expected barriers were the social stigma and their belief that meals offered are not of adequate nutritional quality.

3.3 Methods

Research Method

This study used focus group interviews to explore the perceptions of students and parents of the SBP in southeast Alabama public schools. Focus groups are a data collection technique in which target audience members are asked to share concerns, experience, beliefs, opinions, and the processes underlying them (85). Focus group research provides qualitative data, which is characterized as inductive, emerging, and shaped by the researcher's experience in collecting and analyzing data (86). Rather than starting from a preconceived theory or hypothesis, qualitative

inquiry is done from the ground up, with the researcher deriving an understanding of the topic based on the group discussions. Some key characteristics of qualitative research are that it takes place in a natural setting where the participants experience the issue under study, uses multiple sources of data, uses an inductive data analysis and an emergent design to allow the process to change as data is collected, focuses on participants' perspectives, and the identification of the researcher as the key instrument (86). Quantitative results have already shown low SBP participation rates in Alabama (68), but they do not tell us the reasons why students are or are not participating. Therefore, a qualitative inquiry was the best method for this study, to show the perceptions of students and parents of the SBP and to explore what motivates SBP participation.

Focus groups are widely used in exploratory and qualitative research to elucidate what participants think and why they think as they do (72). Focus group participants are selected because they have certain characteristics in common that relate to the topic of the study, and focus groups are conducted several times with similar participants so that the researcher can identify trends and patterns (87). Typically, focus groups consist of five to ten people, but can have up to twelve participants. Six to eight participants per group is considered to be ideal, because it allows participants to easily respond to the remarks of others made during the session. This exchange makes the process less intrusive than individual interviews, and permits the groups to flow in a discussion form (87). Three to four focus groups with any one type of participant should be planned, but groups should continue to be conducted until saturation is reached. Saturation is the point when a range of ideas has been heard and no new information is being brought up.

As a researcher, I brought my own personal beliefs and biases to the project. As a graduate student who is studying nutritional sciences with a focus on hunger issues, I believe that

nutrition assistance in schools is not only a right of the students, but is the responsibility of the federal government. Also, due to my position as a graduate student and researcher in nutrition, it may have influenced the parents' responses to me, as they may not have felt as comfortable being open and honest with me about their or their child's eating habits.

Participants

The Alabama State Department of Education encouraged the implementation of this study in two county school systems and one city school system in southeast Alabama. City school systems serve children inside the city limits, and are funded with city taxes. County school systems serve children that reside in the county, but outside specific city limits. A county school system and a city school system may exist within the same county in Alabama. For example, Auburn City schools are located in Lee County but are separate from the Lee County school system. School selection was based on several factors: a) suggestions from the state Child Nutrition Program (CNP) staff, b) willingness of CNP Directors, principals, and teachers to support participation and recruitment, and c) travel and personnel resources. A total of five schools participated in the study. For each school, the principal gave written approval for the focus groups to take place in their school.

Students and parents from grades 4 and 5 were invited to participate in the focus groups. This age group was selected because studies have shown that breakfast consumption decreases between grades 4 and 6 (76), so children in grades 4 and 5 may be more likely to participate and may also provide insight into why breakfast consumption drops during that time. Both students and parents were interviewed because they represent the groups that are most influential in decisions regarding participation in the SBP. The use of the two different population groups is a

Multiple-Category Design (87). This design is when focus groups are conducted with several audiences, sequentially or simultaneously, allowing the researcher to make comparisons both from one group to another within a category (e.g., between student groups) and from one category to another (e.g., comparing what students said to what parents said).

The students and parents were invited to participate through an introductory letter sent home with the students explaining the purpose and dates of the study (Appendix A). Included with the letter were permission/assent forms for student participation (Appendix B), consent forms for the parents or legal guardians to participate (Appendix C), and consent forms for audio recording (Appendix D). All forms were printed on Auburn University, College of Human Sciences letterhead. The students returned their signed forms to their teachers if they and/or their parents chose to participate. The teachers turned the forms in to the school secretaries, who gave them to the researcher on the day of the focus group.

Focus groups were conducted from May to December 2010 (**Table 4**). A total of nine focus groups were conducted. Three focus groups were conducted with parents and/or legal guardians in three schools. Six focus groups were conducted with students in four schools. There was an average focus group attendance of 8 participants, with numbers ranging from 5 to 12. Adult participants received a meal and \$30 as compensation for their participation. Student participants received a water bottle and pencil at completion.

Table 4. Collection of Data

	Students	Parents
May 2010	Focus Group Interviews 1, 2, 3, 4	Focus Group Interview 1
October 2010		Focus Group Interview 2
November 2010	Focus Group Interviews 5, 6	
December 2010		Focus Group Interview 3

Focus Group Procedures

A set of questions for parent and student groups was developed and tested by the researcher before the focus groups were conducted (Appendices E and F). Open-ended questions were used to start the discussion and capture a wide range of beliefs, barriers, and behaviors. These questions served as a guide for the facilitator, who took a flexible approach, in an attempt to ensure that the group directed the discussion rather than the moderator. Every focus group began with the opening question, “*What does breakfast mean to you?*” The opening question was designed to be easy to answer, with the purpose of encouraging the participants to talk and feel comfortable in the group setting (87). Key questions were then asked with participants being allowed to talk until no more views were expressed. The moderator used follow-up questions (e.g. “*Can you tell me more about that?*”) or clarifying questions (e.g. “*Was that in the cafeteria at breakfast or at lunch?*”) to explore issues at a deeper level. As suggested by Krueger and Casey (87), a final insurance question was used to ensure that critical aspects of the topic have not been overlooked. This question “*Is there anything that we have not talked about today that you think we should have?*”

The researcher was present to introduce the study and go over the consent forms. The researcher verified that all participants had a completed consent form and gave their consent for audio-recordings, and assured participants of the confidentiality of comments. A trained facilitator conducted each focus group using standard moderation techniques (87). The focus groups were conducted at the school where the participants were recruited from, in meeting rooms with chairs arranged in a circular manner around a boardroom style table, as suggested by Kitzinger (72). All focus groups were audio-recorded, and the audio-recorder was set up prior to the participants entering the room. Each focus group lasted approximately 45 minutes.

Data Analysis

The researcher and a research assistant transcribed verbatim the audio-recordings of each group. All participant and school names were excluded from the transcriptions for protection of privacy. Written notes recorded by the researcher were used to aid the transcription process, as suggested by Krueger and Casey (87). Following transcription and accuracy checking, the transcripts were uploaded to the software program ATLAS.ti (version 6.2.17, 2011, ATLAS.ti Scientific Software Development GmbH, Berlin). Then, coding of text fragments based on content was done through multiple coding by the researcher and a research assistant independently (88).

The data analysis process followed the grounded theory approach, developed by Glaser and Strauss (89), and summarized by Dick (90). Originally proposed in 1967, grounded theory is a systematic approach that sets out to find what theory accounts for the research situation as it is, to discover the theory implicit in the data. In this method, no hypotheses are tested. Instead, using constant comparison, propositions or hypotheses begin to emerge as the researcher collects

data. Glaser (91) suggested researching “areas that need opening up as the richest focus for grounded theory or a field with sparse amount of literature, so contributions are clear and strong.” As previously shown, there is quantitative data to show that SBP participation rates in Alabama are low, however there currently is no qualitative inquiries into why more students are not participating, and what influences their decision to participate. Grounded theory was determined to be the best approach for exploring these factors, and to develop a theory that can be used for future exploration.

The constant comparison method is at the heart of grounded theory (90). In this method, the researcher approaches the first set of data with a set of basic questions: “What is going on here? What is the situation? How is the person managing that situation?” (90). The second set of data is then coded with the first set and its categories and early themes in mind. As the comparisons continue, the researcher begins to compare the data sets to the theories that are emerging. Memoing is used during this process as a note to oneself about hypotheses that are developing regarding a specific category and relationships between categories. As the categories emerge, categories begin to appear with higher frequency and a connection to multiple other emerging categories. These are identified as the “core categories.” Once the researcher has identified them, coding ceases for text unrelated to these categories, and the analysis becomes focused on the categories that are related to core categories. When the data sets fail to add new information to what is already known about a category, its properties, and its relationship to the core category, then saturation is reached and coding ceases for that category. A table in Appendix G provides a list of coding categories and subcategories for the present study. Analysis of early focus groups sometimes leads to new questions or directions of inquiry. This is

a natural part of grounded theory work, which seeks to confirm or disconfirm the emerging hypotheses until saturation is reached.

Qualitative validity may be demonstrated through the use of accepted procedures that check the “accuracy” of the research findings (86). These procedures include prolonged immersion in the field and data, triangulation, peer review, negative case analysis, member checking, clarifying researcher bias, detailed descriptions of the participants and settings, and external audits. Lending to the validity of the present study is the researcher’s prolonged engagement in the field, by attending all focus groups, transcribing all audio-recordings, and coding all collected data. The researcher also spoke with the principals of all the schools to gain a sense of the culture, and was involved in the recruitment of all participants. To further lend validity, the researcher clarified research bias to allow readers to understand any bias or influence that may exist due to the researcher’s position as a graduate student in nutrition and personal beliefs in the importance of nutrition assistance programs. Reliability can be achieved in qualitative research through the use of intercoder agreement based on the use of multiple coders to analyse data (86). In the present study, a research assistant that was familiar with the focus group method but uninvolved with the data collection also coded the transcripts, and the coded text was then compared and adjusted until a consensus for the coding was reached. This was done to achieve inter-rater reliability (87).

Epistemological Distance

I approached this study, the data collection, the choice of method, and the interpretations of the findings as a graduate student in nutritional sciences, who has studied the impact of breakfast consumption on children and strongly believes in nutrition assistance programs.

However, I did not have any prior experience with or connection to the public schools of Alabama. I also have no personal experience with the SBP. I believe this personal distance from the schools and the SBP allowed me to approach the data with fewer preconceived ideas and assumptions. Inter-rater agreement helps to further retain the reliability of qualitative researchers that are immersed in their research.

Ethical Approval

Ethical approval for this project was obtained from the Institutional Review Board at Auburn University.

3.4 Results

Introduction

The following chapter contains the results from the nine focus groups held at five schools in southeast Alabama. A total of 78 subjects participated in the study. Participants included 49 students from grades 4 and 5 in six focus groups, and 29 parents and guardians of students in grades 4 and 5 in three focus groups. Focus group sizes ranged from 5 to 12 participants with 8 being the average. The focus groups were scripted to facilitate discussion and ensure similar topical dialogue among the nine groups. Students and parents were asked parallel sets of questions (Appendices G and H) with additional questions to clarify or explain responses to the standard questions. All quotes presented in this report were derived directly from the transcripts and were not edited for grammar or speech problems.

As data was collected, the researcher transcribed the audio-recordings and entered them into Atlas.ti for coding. Categories and themes were then identified. Additional data were

analyzed using the emerging themes, and eventually five categories and twelve themes emerged (see **Figure 1**).

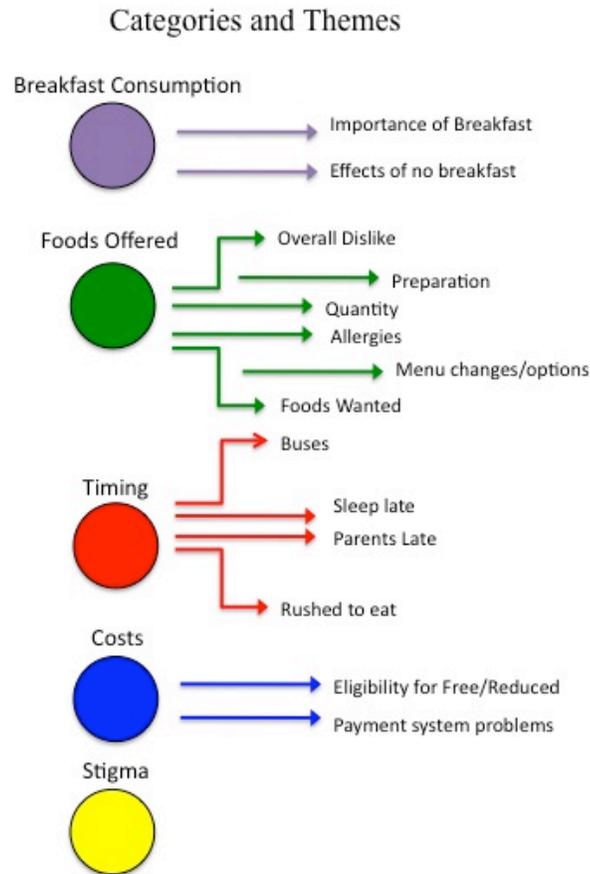


Figure 1. Categories and Themes Emerging from Data Analysis

Summary of Findings

Discussions of findings related to the categories and their themes are presented below.

Breakfast Consumption

The importance of breakfast consumption was a common theme in both the student and parent focus groups, as was the effect of breakfast skipping on them and/or their child. There were no disparities expressed in the value of breakfast, all parents and students agreed that it was

“the most important meal of the day.” The students especially appeared to have an understanding of the importance of eating breakfast daily, and how breakfast consumption can have an impact on their day. When asked to define breakfast, common responses included that it was “brain food” and that “it gives energy and nutrients.” Students also were aware of both the physical effects of skipping breakfast, and how it can impact them in school. They discussed how when they missed breakfast they felt sick, got stomachaches, were “grouchy,” and couldn’t concentrate. These responses from students indicated the negative consequences of breakfast skipping.

“Sometimes I won't listen to the teacher because I'm sleepy.”

“If I don't get a meal when I'm used to, like, I'm used to getting something to eat early in the morning or around 7 or 6, and if I don't get something my stomach starts to hurt. So, other people may be like that and sometimes it hurts so much that I can't focus... and so if some people don't eat and their stomach hurts, they can't focus on class work.”

The students also talked about the importance of the SBP, and appeared to consider it important that their school had one. Students mentioned the teachers and faculty at their school all wanted the kids to eat breakfast every day because it was so important. One child's response showed the positive association they had with the SBP and their gratefulness for the program.

“I think it's a privilege that the school gives you a chance to have breakfast if you don't have time at the house. It's giving you a chance to still get breakfast.”

The parent focus groups also brought up the importance of their child eating breakfast, and how it can influence their child's behavior, academic performance, and energy level. They also believe in the importance of not only breakfast consumption, but also of the schools providing breakfast for the students. Many parents mentioned that due to their mornings being so busy and having little free time, they are often unable to make breakfast for their children. They appreciated that the SBP gave them one less thing to worry about in the morning.

“It's a positive for me, and also a major convenience. Because I have two girls, so I can focus on getting them prepared, um, for school rather than going in the kitchen trying to fix the food, and then trying to get them ready, and the books, and the bag, and then coming to school.”

Foods Offered

Students and parents both perceived the foods being offered for breakfast at their schools as a significant barrier to participation in the SBP. The themes present under this category, in addition to an overall dislike of the food, was preparation, quantity, allergies, and the menu changing and not providing them with additional options, and foods they would like to see offered at their school for breakfast.

When asked what they envision when they think of school breakfasts, the overwhelming response from students and parents is negative. Common words used to describe the meal included “not good,” “nasty,” “really disgusting,” “junk,” “no taste,” and “burnt.” Two children even mentioned that the school breakfasts made their stomachs hurt. Many of the parents stated their child didn't eat breakfast at school because “they just didn't like the food” and often stated they have seen the foods offered and they would not eat it themselves. One parent said she had seen her child's breakfast the morning of the focus group, and said “it turn my stomach.” With the overwhelming response being that students don't like the taste of the food, the discussion sought to determine what about the foods they don't like, other than taste. Preparation was frequently talked about in both the parent and student groups. In every student focus group, they said the food was cold on the inside and “they don't cook it right.”

“There a pair of sausages they be undone. You open the meat and you just see some cold.”

Parents perceived that most of the foods being served are not hot foods, but instead consisted of “quick items” like cereal, fruit cups, and toast. They believed that children would be more likely

to eat the breakfast if it was something “wholesome and warming” rather than the “quick” foods they were being served, such as fruit cups. Parents also agreed with the students when foods that were supposed to be hot foods were served, they were not prepared adequately. One parent described how she had to drop her kids off at school early due to her job, and despite her children being some of the first kids to get the breakfast, the foods were already cold.

“Breakfast can’t be prepared that morning because my kids are, like, in the line first to get food and the food is still cold, the food is still hard. It’s impossible for them to actually be coming in that morning preparing food. So that food has gotta be left over or what have you, prepared the night before, stuck in the refrigerator and get up that morning and they call themselves heating it up in order for the kids to eat it.”

A common dislike discussed in the student focus groups was for the milk that is being served. The students often perceived the milk to be “watery,” having “freezer burn,” “expired,” and “spoiled.” This was a topic presented by the students in every focus group, as well as the need for options other than the milk. One student’s statement summed it up well for all of the student focus groups:

“Um, about the milk. They need to do something about that. I can’t be drinking those spoiled milk. They need some water or something cause we ain’t going to keep drinking milk.”

Despite the fact that meals offered through the SBP are required to meet federal nutrition standards, parents perceived that the breakfasts being offered were not of adequate nutritional value and portion sizes were too small. Proper nutrition was commonly discussed amongst the parents, and opinions did differ. Many parents believed the breakfasts being served consisted of “junk food” and “something simple and easy, like cups of fruit.” One parent simply stated that “It’s supposed to be healthy, but it’s not.” However, there were several other parents who stated that they thought the schools were providing nutritious food, but that they just didn’t think they were providing enough of it. They said that the portion sizes were too small, often consisting of

just a chicken biscuit or bowl of cereal and piece of fruit. They perceived that this lack of adequate nourishment led to low energy levels and behavior problems in the classroom.

“When it's just a piece of toast and some cereal, that's doesn't make [my child] full, and it causes him to act out... it's because they're hungry, they can't focus, and it becomes a problem.”

While the nutritional value of the food did not come up in the student focus groups, the food quantity and portion size did come up frequently. Students perceived they were not receiving enough food to keep them full until lunchtime, and talked about feeling hungry because of it. But, as one student stated, they don't just want larger portion sizes, they want it to taste better: “We want more food. More *better* food.”

Allergies to some of the foods being served were another issue that both students and parents perceived as a barrier to participation in the SBP. As one parent said, “A lot of kids can't eat certain foods... some of them have allergies, so they can't tolerate them.” Food allergies that were brought up included lactose, gluten, and peanuts. Lactose intolerance was an issue that was brought up in every student and parent focus group.

“I think they should have the choice of milk, what kind of milk they want to drink, other than just 2% milk. They need to have lactaid milk.”

Student focus groups frequently brought up the menu changing as a barrier to eating breakfast at school. When the menu changes without notice, and the child does not like what is being served, they frequently said they would just not eat breakfast that day. Students and parents both said there were no second options available during breakfast for students who do not like what is being served. Students and parents both stated what was on the menu influenced whether or not they participated in the SBP that day. Therefore, a change to the menu without notice can have a negative impact on participation and the child's breakfast consumption that day. They also may provide something that is not filling enough for the students when they run

out of certain foods.

“And then they run out [and] they start making us eat cereal. When the biscuits [run out] then they make us eat cereal.”

Students and parents both perceived the foods served in the SBP at their schools to be lacking in taste and palatability, poorly prepared, containing too small of portions and inadequate nutrients, difficult to eat for those with allergies, and lacking in options when the child is not happy with what is served. When asked what foods they would like to see offered by their schools, foods listed were of a wide variety and ranged in nutritional value. Interestingly, students and parents named a lot of the same foods. A variety of fresh fruit options were the most commonly brought up foods that both students and parents wanted offered. Fruit juices were also frequently brought up, often in conjunction with their discussions of the dislike of the milk being served or of lactose intolerance. Specific juices they would like to see served include orange juice, apple juice, and cranberry juice. Other foods that were listed by both groups included yogurt, waffles, grits, sausage biscuits, oatmeal, “more grains,” croissants, and breakfast burritos.

Timing

Timing and scheduling was a category discussed throughout the focus groups, and appeared to be the barrier that was most frequently perceived by parents and students. Themes that fell under timing included buses, students sleeping late, parents being late, and being rushed to eat breakfast once they arrive at school. Students who are late for school, whether it is because their bus was late, because their parents were late, or because they slept in, will either miss breakfast altogether or will be rushed to eat their breakfast in a short amount of time.

Buses were a major theme in the focus groups, and often pose a barrier to student breakfast

consumption. Issues with buses include the buses being late, unreliable bus schedules preventing them from eating breakfast at home, and students missing the bus and having to wait for a relief driver to come or a parent to drive them. In three of the five schools, parents and students said when a bus is late to school, students on that bus don't get a chance to eat breakfast. Instead, they have to go straight to their classroom.

“If my bus is late, it might make me late, and then I won't have enough time to eat breakfast.”

Parents expressed disapproval of the policy of missing breakfast due to the bus because they felt this was something that was not the child's fault. They discussed ways the school could make sure students on a late bus still had a chance to get something to eat. They included having one teacher sit in the lunch room with them while they eat, or calling parents to see if one of them could come to the school and sit with the children from that late bus. The opinion that students who are late due to a school bus should still get a chance to eat breakfast was unanimous.

“I just feel like if the bus is running late, they should prepare something, give them something to eat rather than just not give them anything. But they don't.”

In three student groups and two parent groups, participants said a late bus would result in the children being rushed to eat their breakfast quickly, or in eating something inadequate because they no longer have the original meal available. This also was considered to have a negative impact on the students, as they said they would feel sick from eating too quickly or not have time to eat enough food. One parent describes the rushed environment that children experience when their bus is late:

“... and see a lot of times when I come, I mean, they're rushing the kids to eat and then if a child ask them about a item, “oh, we ran out of it.” So, they're just stuck with a piece of toast and juice and maybe some cereal.”

Bus schedules don't just present a barrier to participation in the SBP, they also can prevent students from eating breakfast altogether. Unreliable bus schedules were commonly discussed as a barrier for breakfast consumption. Parents and students explained the bus may come early one day and late the next, so the child needs to be outside waiting for it at the earliest time possible. The time spent waiting for a late bus is time a student could have spent eating breakfast at home. As one parent explains,

“We don't know what time the bus driver's going to come. [My child's] going to be looking out for that, and he can't go and sit down in the kitchen and eat breakfast.”

Hence, the child is not able to eat breakfast when they get to school because their bus is late, but they didn't get a chance to eat at home because they were outside waiting for their bus. This results in the child not eating breakfast at all which, as previously discussed, has a negative impact on their physical and mental performance.

Bus schedules aren't the only factor in a child being late to school and missing the SBP meal. Students often admitted to missing their bus because they slept in. Missing their bus can also result in them arriving at school after the school breakfast has ended, either because they had to wait for a parent to drive them, or because they waited for a “relief bus driver” to come and pick them up. However, parents perceived it as the responsibility of the school to still provide breakfast to the children arriving late. One mother described how she encourages her son to ask for his breakfast even if he comes in late on the relief bus: "You are entitled. I don't care what time your bus gets there."

Sleeping in and/or running late was a common barrier to SBP participation brought up in student focus groups. Sleeping in can lead to the student missing their bus, waiting on a relief bus, or waiting on a parent to drive them, and ultimately arriving at school after breakfast has

ended. Other reasons given for being late are traffic and parents being late.

Students who get rides to school from their parents often said that arriving late prevented them from eating breakfast. One student even said that the students who don't participate in the SBP are "car riders," because they don't get there in time. Interestingly, this barrier was not brought up in any of the parent focus groups.

The amount of time students have to eat breakfast at school in the morning was another common barrier brought up in both focus groups. As previously discussed, two of the five schools said that when the buses were late, the students were rushed to eat their breakfast. Being rushed was an issue that was brought up outside of the context of buses as well, and came up in every focus group. Reasons given for students being rushed to eat was due to students being late on their own, long lines in the lunch room, not enough time provided for them to eat, and students being sent to the end of the lunch line for talking while in line. The perception of there being too little time for the students to eat appeared to be a barrier impacting all of the students.

"Most kids, when they can get breakfast at school, it's just grabbing it, popping it in their mouth... and then going to get to class before they're tardy."

This shows that both students and parents don't perceive there being enough time for breakfast at the schools, and this influencing the students' breakfast consumption.

Costs

Costs were a barrier that only came up in parent focus groups. No student focus groups discussed costs of the SBP. There were two themes present under costs: eligibility for participation in the free or reduced breakfast program and problems with the payment system at the schools.

Two of the three parent focus groups discussed the eligibility for a free or reduced price

breakfast as being a barrier to their child's participation in the SBP. Parents perceived that if they were just slightly above the poverty guidelines and didn't qualify for a free or reduced price breakfast, they still might not be able to afford it.

“... their home really can't afford to [buy breakfast], but you just, you don't make the guidelines. If you're \$2 off, you're not getting any. And so that's really unfair, because that household still may not be real good.”

Parents did not feel that the qualifications took into account personal economic problems, such as a recently lost job or a family illness. One parent mentioned that it was cheaper to buy a box of cereal and a carton of milk each week than to pay for the school breakfast. A commonly brought up issue was the belief that breakfast should be provided for every student, regardless of the poverty guidelines, because it impacts the child's academic performance.

“I mean, if you're a blank dollar or two dollar over, your child doesn't get. So technically you may not really be able to afford of this, you can't fund your meals. And so that's just really not fair because you still have some kid in that game and they're eating, everyone knows, and your stomach is rumbling, and you can't concentrate.”

The other theme regarding costs was an issue with the payment system the schools used. Parents can either use an online payment system or bring a check or cash to school to be applied to their child's school meal account. Each student has a pin number they enter into a computer to receive their meal. When the student's account is empty, parents said the child would be sent out of the meal line without any food.

“I didn't know it was out [of money on their meal account], I thought they would let me know... Well, they didn't feed him one day, and he came home, and [told me]. I was really mad.”

Many parents expressed frustration at not knowing when those accounts were empty. They would like to have a better system of tracking their accounts online, and they would also like for the schools to contact them when their child's account is getting low, so they can prevent their

child from having to go without breakfast or lunch all day. Parents said the schools were relying on children to tell their parents when their accounts were low, and this was an unreliable method that resulted in the children not eating for a day.

“You can’t tell a child something and then expect them to go home and tell momma... they don’t even know what you’re talking about.”

Parents also were unhappy with the inability to see how the child’s money in their account was being spent. The schools all offer items, such as juices, for purchase at an amount additional to the cost of the meal. Parents would like to be able to see what their child is purchasing so they know what their child has had to eat or drink that day.

“It’s on PayPal, but you’re supposed to list them, the full [meal] or what they ate that day and I can’t go in and see what he ate that day. That helps me determine too what he needs to eat in the evening.”

Stigma

A stigma associated with participation in the SBP was discussed in several of the groups. This stigma is most commonly associated with the perception that the school breakfast is provided for students whose families cannot afford to feed them at home. Most of the students in the focus groups said they ate breakfast at school; however, the perception of who typically is eating breakfast at school still came up in one of the groups. A student’s explanation of who typically is eating breakfast at school showed a negative connotation associated with the program.

“Maybe some of the kids’ parents don’t have enough money to buy their children breakfast and stuff, so the kids just come to eat breakfast at school.”

All of the parent groups discussed the stigma issue, and the impact that it can have on the children. However, the stigma was two-fold in the parent groups. Parents felt that participation in the SBP could be associated with being unable to afford breakfast at home. However they

also talked about how *not* participating in the SBP could have a similar effect. Children whose families cannot afford school breakfast may also be stigmatized for not eating breakfast at school.

“At our kids’ age they don’t like to take their lunch, they want to do what everyone else is doing. Then it’s like, oh, well, you can’t afford breakfast, or, oh, you’re getting free breakfast, and it puts that stigma so early on a child.”

As one parent explained, a child may not understand why they cannot eat breakfast at school and their peers can. Although procedures are in place to avoid overtly identifying students as free or reduced-price participants, the response of a parent who did not qualify for a free or reduced meal indicated that the children are still aware of who is paying and who is not, and don’t understand why they cannot participate.

“The other stigma is that this person can get something free but I can’t but we can’t afford it either so why do you get a free lunch and I don’t get one?”

The most commonly discussed solution to the stigma issue was for the schools to provide breakfast for all students, regardless of their family’s income. This would remove the stigma of being “different” based on whether the child does or does not eat at school, because every child would be a participant.

“It should be equal for everyone... just provide the breakfast for everyone.”

3.5 Discussion

The purpose of this research was to explore the perceptions of students and parents in southeast Alabama in regards to participation in the SBP. The research in this study was focus on perceived benefits of and barriers to participation in the SBP. The following guiding research questions were used to help address this goal:

1. How do students and parents perceive breakfast consumption?

2. What benefits to participation in the SBP do students and parents perceive?
3. What barriers to participation in the SBP do students and parents perceive?
4. In what ways are student perception and parent perception similar and different in regards to the SBP?

The review of findings are organized according to the four research questions.

1. How do students and parents perceive breakfast consumption?

This research first sought to answer how students and parents perceive breakfast consumption in southeast Alabama public schools. Research has shown that breakfast consumption often drops in children between the grades four through six (76). So the first part of this research was exploring the children's opinions about breakfast consumption. If students had a negative perception of eating breakfast, it may impact their participation in the SBP, and thus impact their responses to questions about the SBP. However, overall the students expressed positive opinions toward breakfast, and frequently talked about the importance of eating breakfast daily. Parents also believed in the importance of their child eating breakfast, and talked about how much they appreciated the SBP because it gave their child a chance to eat breakfast before school each morning.

Skipping breakfast has been associated with several factors. For example, children who skip breakfast have lower grades and higher rates of tardiness and absenteeism (4, 9, 10, 15, 17, 24), decreased memory function (17, 21, 24, 26), and more disciplinary problems in school (4, 13, 15). The students' responses were in agreement with these findings. Students said they did not feel well when they missed breakfast, and this led to them not being able to concentrate or

focus in school, not listening to their teachers, and even leaving their class to go to the nurse's office. Parent responses also supported these findings, saying when their child missed breakfast they were too hungry to focus or do well in class. Several parents also said their child has called them and wanted to come home from school due to missing breakfast, which impacts the child's attendance.

Students and parents strongly believe in the importance of daily breakfast consumption for schoolchildren, and they appear to have an understanding of the impact that breakfast skipping can have. For these reasons, they perceive the SBP as being a very important and necessary program to ensure children get the chance to eat breakfast. Other studies on the perceptions of students and/or parents toward breakfast, and school breakfast in particular, have had similar results (75, 76, 79, 80). In these studies, as in the present study, parents and students both perceived breakfast as being important in helping children wake up, concentrate at school, and pay attention to the teacher. They also perceived that the SBP program provided children with the opportunity to eat breakfast when they normally may not have that chance.

2. What benefits to participation in the SBP do the students and parents perceive?

Many research studies have focused on the benefits of the SBP and the impact it can have on school-aged children (10, 15, 18-20, 70). Qualitative studies also have found that parents and students believe the SBP is beneficial because it provides food to those who need it (80), because it is good for the child's brain and their concentration in school (75), and because it provides the students with increased energy and ability to pay attention in school (76). The responses in the present study all support these previous studies. Students talked about how important it was for the school to provide breakfast, because it provided an opportunity for children who didn't have

a chance to eat at home to still eat breakfast. They talked about how they needed breakfast for “brain food” and in order to focus in school, and said that those are reasons why the SBP is important to them. Parents also were aware of these benefits. Despite research findings that showed 37% of school administrators surveyed by the Food Research Action Center (74) believe there is a lack of parent awareness of the academic and behavioral benefits of school breakfast, responses from parents in the present study proved otherwise. Parents discussed how important it was the schools provide all children with breakfast, regardless of their family’s socioeconomic status, because it was “the most important meal of the day” and had a significant impact on a child’s ability to pay attention and do well in school. In the present study, as in the reviewed literature, parents and students both perceived breakfast as being important in helping children wake up, feel their best, concentrate at school, and pay attention to the teacher (75, 76, 79, 80).

A finding from a review of the literature showed that a common perceived benefit of the SBP was the social interaction time that it provided the children, for them to talk amongst themselves and interact with their teachers and principals (73, 75, 80). It is important to note in the present study, this perception was not a major theme. While students did say they often saw their teachers and classmates at breakfast, many said that they were not allowed to talk during breakfast time and if they did talk, they would be separated from their friends and sent to sit at a table alone. Parents and students both said that the reason for the no talking rule was due to the short time available for breakfast. Therefore, the social interaction theme was absent in the present study, and it actually led to a barrier discussed in the next section, that of timing. This finding was not observed in the literature reviewed.

3. What barriers to participation in the SBP do the students and parents perceive?

The review of literature presented many perceived barriers to participation in the SBP, including type and quality of the foods offered (73, 75, 77, 80), scheduling and timing (73-77, 79), and a stigma associated with participation in the SBP (73, 74, 77, 79, 80). The present study found all of these areas to be barriers, as well as the additional barrier of the costs of participation in the SBP.

Students and parents both frequently discussed a dislike of the foods being offered as one of the reasons they or their child would choose to not eat breakfast at school. The main themes for their unhappiness of the foods offered included the preparation of the foods, the quantity of food served being inadequate, an inability to eat the foods offered due to allergies, and the lack of a second option if the child does not like what is being served. Students and parents both felt that the food was overall “nasty” and not prepared in a way they would like it to be. Students said that food that was supposed to be warm, such as sausages, were typically cold on the inside. They also often talked about the milk being expired, which is an issue that other studies have also found (73, 75). The parents perceived the foods being served to be of inadequate portion sizes and to be low in nutritional value. This also correlates with other qualitative studies (73, 75), where parents have said that they didn’t think the schools’ breakfast contained enough nutrients. Many parents responded the schools were serving only “cold meals,” such as cereal and toast, and children wanted to eat a hot meal. This finding supports those of another study, where parents said that hot dishes were not being served at their child’s school (80).

The issue of allergies was not found in the review of literature, but was a prominent theme in the present study. Parents and students both frequently talked about lactose intolerance stopping them from drinking the milk and eating cereal, and said the lack of lactose-free milk

inhibited their participation in the SBP. Other allergies that came up frequently were peanut allergies and gluten allergies. Another theme that came up related to the foods offered was the changing of the menu, and the inability to select from a second option. Students and parents both said they or their child sometimes chose to eat breakfast at school based on what was being served that day. When the menu changes without notice and the child does not like what is offered, they don't have a second option. So, those children will skip breakfast altogether, because they do not like what is being served and they missed their opportunity to eat at home.

When asked what they would like to see served, the student's responses were of a wide range of nutritional values. Interestingly, despite the parents' perception that the breakfasts being offered was of inadequate nutritional value, when asked what they'd like to see served they gave most of the same responses as the children. Commonly named foods included yogurt, waffles, grits, sausage biscuits, oatmeal, "more grains," croissants, and breakfast burritos. This finding shows the students are interested in having more nutritious options available for breakfast; however they also would like more unhealthy options as well. These findings are consistent with the findings of McDonnell *et al.*(73), who found that children's preferences did range in nutritional values, as well as parents' desire for more healthy options to be made available.

Several themes appeared under the category of timing as a barrier to participation in the SBP. These included bus schedules, parents being late, students sleeping in, and being rushed to eat. The theme of bus schedules affecting participation in the SBP was the most frequently occurring theme, and this barrier has been a commonly presented one in other research studies on SBP participation (74, 75, 79). When a student's bus is late and arrives at school after the SBP has ended, students on that bus either do not get to eat breakfast or are rushed to eat quickly, and

don't have an adequate amount of time to eat enough. Further, when the bus is late, the students don't want to go inside their house to eat breakfast because they are worried the bus will come during that time. So, they end up having to go without food for that morning.

For students who get rides to school from their parents, the parent being late and making them late was a commonly listed barrier in the student focus groups. Interestingly, this did not come up in any of the parent focus groups. It is possible the parents do not want to see themselves as a reason for making their child late, or the child was running late and blamed their parent for it. This finding was not observed in previous reports.

A significant barrier to participation in the SBP can be students sleeping in. As previously shown, students have to be on time in order to eat the school breakfasts. Research has shown that students often state a reluctance to wake up earlier is a reason they don't eat breakfast at school (73, 74, 76). Missing the bus due to sleeping in, as previously discussed, is another frequently stated reason for why children aren't eating breakfast. It appears that if sleeping in plays a large role in getting to school on time, more needs to be done to ensure children are getting an adequate amount of sleep so, they can wake up early enough to get to school on time for breakfast.

The issue of children being rushed to eat, and it resulting in them not eating enough, was prominent in the present study. Students often said that they only got 10 to 15 minutes to eat every day, and they didn't feel it was enough time. Some students said they ate so fast they felt sick afterwards, and one student even talked about vomiting after eating their breakfast too quickly. Parents also considered this to be a problem and believed more time should be given to the students to eat in the morning, even if they are arriving late because of their bus. Other studies also have found students, parents, and even school administrators perceive the short

amount of time available for breakfast as being a significant obstacle in SBP participation (74, 76, 79). However, one study actually found opposite results, with 55% of teachers saying adequate time is allowed for students to complete their breakfast, and 19% of teachers stated too much time was given (80).

Costs were another barrier to participation in the SBP identified by the parent participants. This barrier was unique in that the researcher did not find previous research or reports where school breakfast costs were a barrier to participation. However, a study by Sampson and colleagues (81) surveyed parents about their attitudes toward participation in the SBP. They found that students who qualified for a free breakfast were more likely to participate than students who qualified for a reduced-price breakfast. The identified barrier of costs was especially interesting because the SBP was developed to provide breakfast for those who most need it (49). However, a common theme from parents in this study was that they cannot afford to pay for their children to eat breakfast at school, and yet they do not qualify for a free or reduced-price meal for their children. It appears the poverty guidelines don't take personal situations, such as a job loss or family emergencies, into account and it is affecting the nutritional health of some students. This was not a topic that was ever mentioned in the student focus groups because students are not aware of their family's financial struggles, or because the children were too embarrassed to talk about it in a group. This may be related to the issue of stigma.

Another theme related to cost was issues with the payment system that the schools in southeast Alabama use. Parents can add money to their child's meal account online or at the school with cash or check. Many parents expressed concern over the lack of notification when the account funds run low, and how this has led to their child not eating breakfast or lunch that

day. They believe the school should still provide a meal for the child when the account has run low. They also believe schools need to take more effective steps in notifying the parents of the status of the accounts, to prevent the situation of an empty account from occurring. The parents said that the schools are currently just telling their child, or sending a note home with them, which rarely ever makes it to them.

Several studies have found that stigma can be a significant barrier to participation in the SBP (73, 74, 77-80). Stigma was a strong theme in the parent focus groups of the present study, and was discussed also in the student focus groups, although not as extensively. The parents perceived there were two sides to the stigma issue. The first side is the association of participation in the SBP with low socioeconomic status. The second stigma is a unique one. Parents explained the children feel stigmatized as being “poor” when they *don’t* participate in the SBP. This stigma occurs when children come from families that cannot afford to buy school breakfasts, yet do not qualify for the free or reduced-price breakfasts. Parents explained the children don’t understand why they can’t eat breakfast at school like their peers do, and perceive that inequality as being difficult for a young child to understand.

4. In what ways are student perception and parent perception similar and different in regards to the SBP?

The key shared and differing perceptions that seemed to exist between the student and parent groups are summarized in **Table 5**. Overall, students and parents appeared to have many shared perceptions of the SBP. The only differences occurred in reasons for being late and in costs. Students listed their parents running late as a reason for why they may be late and miss breakfast; however, this did not come up in the parent groups. Parents talked about the expense

of SBP participation and how that may be a barrier to participation, but the children did not mention it. Students also did not talk about issues with the payment system as a barrier to participation in the SBP. These differences were further discussed under the barriers section.

Table 5. Summary of Shared and Differing Perceptions among Students and Parents

Categories/Themes	Shared Perceptions	Differing Perceptions
<u>Breakfast Consumption</u>		
1. Importance of breakfast 2. Effects of no breakfast	1- Both believed in the importance of breakfast consumption 2- Both had understanding of the negative physical, mental, and academic effects of breakfast skipping	
<u>Foods Offered</u>		
1. Overall Dislike 2. Preparation 3. Quantity 4. Allergies 5. Menu changes/Options 6. Foods Wanted	1- Both had an overall negative opinion of the foods offered 2- Both were unhappy with preparation, incl. temperature, food safety 3- Both felt quantities were too small 4- Both mentioned allergies 5- Both thought menu changes and lack of second choices were a barrier 6- Both mentioned many of the same foods	
<u>Timing</u>		
1. Buses 2. Sleep late 3. Parents late 4. Rushed to eat	1- Both felt bus schedules were larger barrier 4- Both felt the rush led to consumption problems	2- Parents didn't say this. Students often listed it as a barrier 3- Students often listed as a barrier. Parents didn't say this.
<u>Costs</u>		
1. Eligibility for free/reduced 2. Problems with payment system		1- Parents felt the cost and their ineligibility for assistance was a barrier. Wasn't mentioned by students. 2- Parents said students running out of money meant no breakfast. Students didn't mention it.
<u>Stigma</u>		
	This topic came up in 3 of 3 parent groups. It only came up in 2 of 6 student groups.	

Limitations

It is important to note there are several limitations inherent in this study. Human error and researcher bias was reduced by the researcher's thorough immersion in the data (the researcher transcribed, coded, and analyzed the focus group data) and by a member check during the data analysis process. Other limitations were:

- The potential for group think in the focus groups could have skewed the discussion about a certain topic.
- The large amount of data and labor-intensive task of transcribing, coding, and analyzing the data could have led to oversights or omissions in the analysis.
- The lack of a second instrument to support findings from the focus group analysis
- Due to the time and location of focus groups, some parents and guardians were prevented from participating, which could have led to a selection bias. There is no information about the perceptions of those who did not participate.

3.6: Conclusions, Implications, and Recommendations

“It should be equal for everyone... just provide the breakfast for everyone.”

Conclusions

Nine focus groups were conducted with students and parents of students in grades 4 and 5 in southeast Alabama. As the data were analyzed, there were clear connections to factors previously cited in the literature. Literature-based issues included the barriers of timing and scheduling, foods offered, and stigma. In addition, the significance of the benefits of the SBP have been thoroughly reviewed. All of these areas were addressed by the participants in the data

collection process at the elementary schools in the present study. These barriers and benefits, as well as additional barriers brought up by the participants in this study, were highlighted in the results and discussion portions of this study.

Among the key barriers found, the most striking to the researcher was the barrier of cost. The SBP was founded with the intent that the program "be made available in all schools where it is needed to provide adequate nutrition for children in attendance" (49). Despite free and reduced-price meals being based on the poverty guidelines, participants in this study indicated that many of them who did not qualify for these programs, still could not afford to pay for their child to participate. A common discussion in the parent groups was their desire for the schools to provide breakfast to all the students who attend, despite their family's income. Parents and students strongly believe that breakfast is the most important meal of the day, and they understand the negative impacts that breakfast skipping can have on children academically and physically. Therefore, parents believe that every student should start the day with an equal opportunity to eat breakfast for free.

Despite the desire for more students to have the opportunity to eat breakfast at school for free, parents and students frequently discussed dissatisfaction with the foods offered and improvements they would like to see. This is a theme that many research studies on school breakfast have identified (73, 75, 77, 80), and it did not come as a surprise to the researcher. However, the students in every school talked about their milk being spoiled and their food being undercooked. This appears to be an area that school personnel needs to address, as food safety parameters are required to be followed in all schools participating in the SBP. Alabama's requirements are based on the 2005 FDA food code (92), which recommends that potentially hazardous foods, including all leftovers, should be heated to 165° F and put on the steam table

hot and kept at an internal temperature of 140° F or above (93). Guidance for the schools published by USDA's FNS also recommends that milk dates are checked to ensure safety and quality (94). If these students are correct in their statements, then the schools are not abiding by the Food Code and more attention needs to be directed at following these guidelines. However, it is also possible that the students do not understand the labeling on the milk, and may perceive it as being expired when it is not. The date that is currently on the milk is the "sell by" date and not a "drink by" date, and the students may be unaware of that. Therefore, a program to educate the students about the meaning of the terms used to label milk and how to tell when it is expired may also be beneficial to this issue.

Parents stated they were not happy with the quality of the food being offered, as they perceived them as being inadequate nutritionally. Education may be needed to help the parents understand that school breakfasts must meet federal nutrition standards (2), and that their children are receiving an adequate breakfast that consists of one-fourth of the Recommended Dietary Allowance for protein, calcium, iron, Vitamins A and C, and calories. Additionally, both students and parents named some foods they would like to see served, which were of high fat and calorie content. Therefore, further education on what foods are nutritionally adequate for school-age children may be needed for both students and parents.

The issue of allergies was another barrier found in this study that was not present in previous research. Many parents and students discussed lactose intolerance and its impact on school breakfast consumption. When a meal is offered for breakfast that contains milk products, the students don't have a second option and have to skip the meal. If schools provided a lactose-free milk option, then lactose-intolerant students may also be able to eat foods normally containing lactose, like cereal, rather than skipping the meal altogether due to their allergy. This

also pertains to other allergies, such as gluten and peanuts. The addition of a second option provides more students with the chance to eat breakfast.

The themes under timing and scheduling are important for future research and for consideration by the school personnel. The most alarming discovery in this category was that in some schools when a bus is late, the students on that bus are sent directly to class. Both students and parents expressed a feeling of unfairness about this rule, because it is not the child's fault if their bus arrives late. Further, the children spend their time waiting for their bus because they don't know it's late, and time could have been spent getting breakfast at home if they had known they wouldn't be able to eat upon arrival. Schools where this policy is in place may need to evaluate the circumstances behind the buses being late and develop a system where they can still provide breakfast for those students who arrive on a late bus. One parent also suggested the schools establish a system of alerting the parents of a late bus, so that they could bring their child inside from the bus stop and feed them.

The stigma issue has arisen as a barrier in many studies (73, 74, 77-80), and deserves some attention. One possible solution suggested by the parents is if all students were provided with a free breakfast, then the stigma of eating the school breakfast because they are "poor" is removed. It would instead be normal to eat breakfast at school, and every child would do so. Another possible solution is a breakfast promotion program, where students are educated on the benefits of school breakfasts and the SBP. This could possibly lead more students to want to eat breakfast at school, and to change their negative opinion of it.

Despite the many reported benefits of school breakfast, including grades, school attendance, memory, and weight, barriers to participation in the School Breakfast Program still exist and participation in the SBP still remains far lower than participation in the National School

Lunch Program (NSLP). One of the major implications that emerged from previous research was that expanded SBPs might reduce breakfast skipping, and thereby lead to improved learning for students. Understanding the perceptions of students, parents, and school personnel could assist in designing successful approaches to promoting the SBP. The research from the present study supports past studies on perceptions of the SBP program, as well as presents new barriers. The most significant new barrier is the impact of the cost of breakfast for those who do not qualify for the free or reduced-price meal.

Implications

This research has many implications for the future study of SBP participation, especially in Alabama. It provides a basis for further exploration of what foods students and parents would like to see offered in schools, how timing and scheduling in schools can affect breakfast consumption, qualification for free and reduced-price school meals, and the stigma that is associated with participation in school meal programs. In addition, identified themes under these categories have begun building a conceptual knowledge base with which to further explore this phenomenon of SBP participation. Findings also offer supporting evidence for the benefits of breakfast consumption in school-age children, and the possible side effects of breakfast skipping. Though quantitative research is present to show the lack of participation in the SBP in Alabama, no prior research has focused exclusively on the perceptions of stakeholders on the barriers to and benefits of SBP participation in Alabama.

The present study was part of a larger study on the School Breakfast Program in southeast Alabama, and how breakfast consumption can be increased. Findings of this study will be utilized in guiding further exploration of breakfast consumption and SBP participation in this

geographical area. It will also assist researchers and industry in understanding the unique barriers that are currently preventing more students in southeast Alabama from participating in the SBP. To develop effective messages for any communication-based program, it is vital to understand the “realities” of the target audience, in this case school-aged children and their parents. A successful educational message must be relevant, meaningful, and compelling to the children and their parents (95). The results from this study are the first stage of the process of developing these messages, to promote the consumption of breakfast and participation in the SBP in Alabama.

Themes identified in this study give stakeholders and policy makers of Alabama, and nationwide, a look into the specific perceptions and desires of parents and students. It also gives them insight into the barriers that are affecting parents, and therefore inhibit their children from participating in the SBP. The use of the grounded theory and the constant comparison method offers researchers a tool for quickly assimilating information collected from the students and parents. This technique is applicable across many fields and is useful for exploring categories and themes within data while limiting the researcher’s preconceptions as much as is possible. The theory is emergent, emerging from the data as they are collected. It is particularly useful when exploring relatively new areas, or to gain a fresh perspective in a familiar situation.

Recommendations

As is shown in the literature, there is little information regarding the perceptions of students and parents in regards to the School Breakfast Program. Future research should focus on this informational gap, further exploring the ways in which the SBP can be promoted to increase participation. Research should combine qualitative and quantitative methods, in a

mixed-methods study, to explore the connection between perceptions and factors such as family income, dietary intake and nutritional status of students, and participation in the SBP. Specific recommendations include:

- 1) Studies involving a larger sample of students and parents from other areas of Alabama should be conducted to verify these results.
- 2) Each category should be further explored in a large sample to determine the significance and impact of each theme present under that category.
- 3) The diets of 4th and 5th graders should be assessed to explore the correlation between SBP participation and their nutritional status.
- 4) The state of Alabama should undertake a breakfast promotion program to address the barrier of stigma, by encouraging participation among all students, regardless of their family's financial status.
- 5) A survey should be conducted from the schools in the present study to further explore at-home situations, such as breakfast consumption, smoking, financial status, demographics, and how these can impact SBP participation.
- 6) Studies involving an expanded population of stakeholders involved in the SBP, such as foodservice directors, Child Nutrition Directors and Managers, and principals.
- 7) A study to look at the sleep hygiene of children in Alabama, to see if they are getting adequate amounts of sleep, and how this impacts their ability to wake up in time to eat breakfast.

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Appendix A

Dear Parents,

The College of Human Sciences at Auburn University is launching a statewide initiative to increase breakfast consumption by children in Alabama. For the initial phase of this initiative, we will be asking children and parents about their diets including breakfast. We have chosen your child's school to be a part of this assessment.

The needs assessment will involve:

- Focus groups with students, parents, and Child Nutrition school personnel to identify perception of and barriers to the School Breakfast Program (SBP)
- Dietary Assessment of select students, to provide clear information about children's nutritional status
- A questionnaire on household resources that may have an impact on eating breakfast

I am writing to you today to invite you and/or your child to participate in the first part of this needs assessment, the Focus Group meetings.

There will be two Student Focus Groups, one with 10 females and one with 10 males. Only children in grades 4 and 5 are eligible to participate. They will be held during school hours, in the school, for one hour. Each group will meet only once. The Focus Group discussion will include questions about the children's attitudes towards and opinions of the Breakfast Program at their school. The children will be compensated for their participation with a small gift, such as a water bottle.

There will be one Parent Focus Group, and it will consist of 10 parents/legal guardians. Only parents/legal guardians of students in grades 4 and 5 will be eligible to participate. The focus group will be held at [School Name] on [Date] at [Time] for one hour. The Focus Group discussion will include questions about the parents' attitudes towards and opinions of the Breakfast Program at their child's school. Parents/legal guardians will be compensated \$30 for their time.

We do not anticipate any risks or discomfort to you or your child from being in this study. However, even though the researchers will emphasize to all participants that comments made during the focus group session should be kept confidential, it is possible that participants may repeat comments outside of the group at some time in the future. To minimize these risks, we will explain the importance of confidentiality and encourage to the participants to not discuss what is said during the focus group outside of the session.

If you would like for your child to participate in the Student Focus Group, then please complete the attached “Permission/Assent” form with your child. If you would like to participate in the Parent Focus Group, then please complete the “Informed Consent” form. Your child should return these completed forms to their home room teacher.

Please note: Your child’s participation in the Student Focus Group **does not** require your participation in the Parent Focus Group, nor does your participation in the Parent Focus Group require your child’s participation in the Student Focus Group. Your child may participate without your participation, and vice versa.

If you have any questions, please feel free to contact Alexis Sabol at ans0017@auburn.edu, or Claire A. Zizza, PhD. at zizzaca@auburn.edu.

Sincerely,

Alexis Sabol
Graduate Student, Auburn University

Appendix B

PARENTAL PERMISSION/CHILD ASSENT for a Research Study entitled “Ending Child Hunger in Alabama: A Needs Assessment”

Your child is invited to participate in a research study to identify children’s attitudes toward participating in the school breakfast program. The study is being conducted by Alexis Sabol, Graduate Student, under the direction of Claire A. Zizza, PhD, Assistant Professor in the Auburn University Department of Human Sciences. Your child was selected as a possible participant because he or she is a 4th or 5th grade student at an elementary school in Alabama. Since your child is age 18 or younger we must have your permission to include him/her in the study.

What will be involved if your child participates? If you decide to allow your child to participate in this research study, your child will be asked to participate in a focus group, where thoughts about school breakfasts are discussed. Males and females will be in separate groups. During the session, we will have a trained moderator that will guide the discussion, allowing for talk among the participants to be free to flow. Participants will often be responding to the remarks of others made during the session, which makes the process less intrusive than individual interviews, and allows for the groups to flow in a discussion form. The sessions will be audio recorded, to permit review by the researchers of the session results. These audio recordings will be deleted within two years. Your child’s total time commitment will be approximately one hour.

Are there any risks or discomforts? We do not anticipate any risks or discomfort to your child from being in this study. Even though we will emphasize to all participants that comments made during the focus group session should be kept confidential, it is possible that participants may repeat comments outside of the group at some time in the future. Therefore, we encourage your child to be as honest and open as they can, but remain aware of our limits in protecting confidentiality. To minimize these risks, we will explain the importance of confidentiality and encourage to the participants to not discuss what is said during the focus group outside of the session.

Are there any benefits to your child or others? Research is designed to benefit society by gaining new knowledge. Your child may not benefit personally from being in this research study.

Will you or your child receive compensation for participating? To thank your child for participating, your child will be given a small gift as appreciation, such as an Auburn water bottle.

Are there any costs? No.

Parent/Guardian Initials _____

Participant Initials _____

Page 1 of 2

If you (or your child) change your mind about your child's participation, your child can be withdrawn from the study at any time. Your child's participation is completely voluntary. If you choose to withdraw your child, your child's data can be withdrawn as long as it is identifiable. Your decision about whether or not to allow your child to participate or to stop participating will not jeopardize your or your child's future relations with their school, Auburn University or the Department of Human Sciences.

Your child's privacy will be protected. Any information obtained in connection with this study will remain confidential. The researchers will protect the data collected by storing the files on a computer in a graduate office at Auburn University. The office will remain locked in the absence of the researchers, and the computers will be secure with access only provided to researchers that are involved in the project. Information obtained through your child's participation may be published as a Masters Thesis. It may also be presented at a stakeholder coalition meeting to develop a breakfast promotion program in Alabama.

Participation in a focus group contains the inherent risk that other participants may disclose information you choose to share. Please be aware that your child can choose not to participate, not to answer specific questions, or answer all questions asked by the researcher(s).

If you (or your child) have questions about this study, please contact Alexis Sabol at ans0017@auburn.edu or Dr. Claire Zizza at zizzaca@auburn.edu. A copy of this document will be given to you to keep.

If you have questions about your child's rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH FOR YOUR CHILD TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO ALLOW YOUR CHILD TO PARTICIPATE. YOUR CHILD'S SIGNATURE INDICATES HIS/HER WILLINGNESS TO PARTICIPATE.

Participant's signature Date
Date

Investigator obtaining consent

Printed Name

Printed Name

Parent/Guardian Signature Date

Printed Name

Appendix C

INFORMED CONSENT for a Research Study entitled “Ending Child Hunger in Alabama: A Needs Assessment”

You are invited to participate in a research study to identify parental opinions about the school breakfast program, as well as their breakfast eating habits as modeling for their children. The study is being conducted by Alexis Sabol, Graduate Student, under the direction of Claire A. Zizza, PhD, Assistant Professor in the Auburn University Department of Human Sciences. You were selected as a possible participant because you are the parent of a 4th or 5th grader at an elementary school in Alabama and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to participate in a focus group, where school breakfasts and how they impact your child are discussed. During the session, we will have a trained moderator that will guide the discussion, allowing for talk among the participants to be free to flow. Participants will often be responding to the remarks of others made during the session, which makes the process less intrusive than individual interviews, and allows for the groups to flow in a discussion form. The sessions will be audio recorded, to permit review by the researchers of the session results. These audio recordings will be deleted within two years. Your total time commitment will be approximately one hour.

Are there any risks or discomforts? We do not anticipate any risks or discomfort to you from being in this study. Even though we will emphasize to all participants that comments made during the focus group session should be kept confidential, it is possible that participants may repeat comments outside of the group at some time in the future. Therefore, we encourage you to be as honest and open as you can, but remain aware of our limits in protecting confidentiality. To minimize these risks, we will explain the importance of confidentiality and encourage to the participants to not discuss what is said during the focus group outside of the session.

Are there any benefits to yourself or others? Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study.

Will you receive compensation for participating? To thank you for your time you will be offered \$30 as compensation.

Are there any costs? No.

Participant's initials _____

Page 1 of 2

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with your child's school, Auburn University or the Department of Human Sciences.

Your privacy will be protected. Any information obtained in connection with this study will remain confidential. The researchers will protect the data collected by storing the files on a computer in a graduate office at Auburn University. The office will remain locked in the absence of the researchers, and the computers will be secure with access only provided to researchers that are involved in the project. Information obtained through your participation may be published as a Masters Thesis. It may also be presented at a stakeholder coalition meeting to develop a breakfast promotion program in Alabama.

Participation in a focus group contains the inherent risk that other participants may disclose information you choose to share. Please be aware that you can choose not to participate, not to answer specific questions, or answer all questions asked by the researcher(s).

If you have questions about this study, please ask them now or contact Alexis Sabol at ans0017@auburn.edu or Dr. Claire Zizza at zizzaca@auburn.edu. A copy of this document will be given to you to keep.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO PARTICIPATE.

Participant's signature Date

Investigator obtaining consent Date

Printed Name

Printed Name

Appendix D

AUDIO RELEASE

During your participation in this research study, “Ending Child Hunger in Alabama: A Needs Assessment”, you will be audio recorded. Your signature on the Informed Consent gives us permission to do so.

Your signature on this document gives us permission to use the audio recording(s) for review for purposes of this study. These audio tapes will not be destroyed at the end of this research but will be retained for up to two years.

Your permission:

I give my permission for audiorecordings produced in the study, “Ending Child Hunger in Alabama: A Needs Assessment” to be used for the purposes listed above, and to also be retained for two years.

Participant’s Signature Date

Investigator’s Signature Date

Participant’s Printed Name

Investigator’s Printed Name

AUDIO RELEASE - MINOR

During your child’s participation in this research study, “Ending Child Hunger in Alabama: A Needs Assessment”, your child will be audio recorded. Your signature on the Informed Consent gives us permission to do so.

Your signature on this document gives us permission to use the audio recording(s) for review for purposes of this study. These audio tapes will not be destroyed at the end of this research but will be retained for up to two years.

Your permission:

I give my permission for audio recording(s) produced in the study, “Ending Child Hunger in Alabama: A Needs Assessment”, which contain voice recordings of my child, to be used for the purposes listed above, and to also be retained for two years.

Parent/Guardian’s Signature Date

Investigator’s Signature Date

Parent/Guardian’s Printed Name

Investigator’s Printed Name

Minor’s Signature Date

Minor’s Printed Name

Appendix E

Student Questions

1. What does “breakfast” mean to you?
2. Tell me about your typical breakfast on a school day. (e.g. where do you eat, with whom)
3. How much time do you usually have in the morning to eat breakfast, before leaving for school?
4. Tell me about your morning at school. When you get there, what do you do first?
5. If you are not eating breakfast before school starts, what are the reasons?
6. How does snacking in the morning affect your school day? Does it help you in learning or playing (e.g. sports, music, games)?
7. When you think about breakfast served at school, tell me what you picture. Who is there and what are they eating?
8. a) What do you like about your school breakfast?
b) What school breakfast foods would you eat?
9. Did I forget to ask anything?/Is there anything else that you wanted to say?

Appendix F
Parent Questions

1. What does “breakfast” mean to you?
2. Tell me about your morning and when you first eat. Include what you eat, who it’s with, what time, etc.
3. a) When you hear the term “School Breakfast Program” what is the first thing that comes to mind?
b) Who do you imagine participating in the program?
4. What are some of the things that would keep your child from eating breakfast at school?
5. a) When you think “nutritious breakfast”, what foods come to mind?
b) What types of foods do not come to mind?
6. Has the SBP provided a healthy breakfast for your child?
7. Did I forget to ask anything? / Is there anything else that you wanted to say?

Appendix G

List of Coding Categories for Data

Number	Code Category
1.0	Breakfast consumption
1.1	Importance of breakfast
1.2	Effects of no breakfast
2.0	Foods offered
2.1	Overall dislike
2.2	Preparation
2.3	Quantity
2.4	Allergies
2.5	Menu changes/options
2.6	Foods wanted
3.0	Timing
3.1	Buses
3.2	Sleep late
3.3	Parents late
3.4	Rushed to eat
4.0	Costs
4.1	Eligibility of free/reduced-price
4.2	Payment system problems
5.0	Stigma
