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Grab 'n' Go Breakfast Increases Participation in the School Breakfast Program

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

ABSTRACT

Purpose/Objective
Breakfast is the most important meal of the day, but when students stay in bed until the last minute, even the most well-intentioned parents may be sending their children off to school without morning nourishment. The crunch for time in the morning was among several reasons why a middle school in Pennsylvania initiated a grab 'n' go breakfast program and conducted a study to determine its effect on breakfast participation. The objective was to compare breakfast participation with a grab 'n' go service to participation when using a traditional service during the same month the previous year.

Methods
The project team initiated a grab 'n' go breakfast for one month toward the end of the school year in 2002. At the end of the month, breakfast participation was compared to participation during the same month in 2001. Investigators used a t-test assuming unequal variances for analyzing participation data. They also tracked changes in food and labor costs associated with the new breakfast service.

Results
Breakfast participation in 2002 significantly increased for all categories of students. The interesting finding was that when breakfast was brought to students in an unrestricted hallway, more students receiving free and reduced-priced meals chose to participate as well.

Applications to Child Nutrition Professionals
School foodservice directors should consider grab 'n' go service to increase breakfast participation, in general, but also should view this type of service as a way to promote access for all children. School foodservice directors also should consider several practical tips on establishing a grab 'n' go breakfast.

INTRODUCTION

In 2002, 8.1 million schoolchildren participated in the School Breakfast Program (SBP), and 83% (6.7 million) of these meals were served to economically disadvantaged children (Food Research and Action Center [FRAC], 2002). At the time of the research in 2003, a similar percentage of breakfast participants received free or reduced-price meals (Food and Nutrition Service, 2003). Most school foodservice directors view the SBP as much more than a program for children from economically disadvantaged homes. The directors work to increase breakfast participation rates because of the importance of breakfast to healthy eating. Every child, regardless of socioeconomic status, should consume breakfast.

Burghardt, Devaney, and Gordon (1995) found that children who participated in the SBP had a higher intake of calories, calcium, riboflavin, phosphorus, and magnesium than nonparticipants. In a study of 9th-graders, 23% of females and 14% of males did not eat breakfast, and skipping breakfast was associated with less-healthful overall food intake (Nicklas, Reger, Myers, & O'Neil, 2000). Several researchers have concluded that skipping breakfast is related to childhood obesity because it contributes to the making of poor food choices over the rest of the day and concentrates more caloric consumption at lunch and dinner (Bellisle, Rolland-Cachera, Deheeger, & Guilloud-Bataille, 1988; Maffeis, Provera, Sidoti, Schen, Pinelli, & Tato, 2000; Ortego, Requejo, Lopez-Sobaler, Quintas, Andres,Redondo, Navia, Lopez-Bonilla, & Rivas, 1998). Eating breakfast has been found to reduce dietary fat intake and minimize impulsive snacking, which is helpful in attaining or maintaining a healthy weight (Schlundt, Hill, Sbrocco, Pope-Cordle, & Sharp, 1992).

When FRAC asked about obstacles to increasing participation in the SBP, officials who manage these programs at the state level listed several reasons. The first (74%) and second (53%) highest reasons listed were, respectively, that school buses arrived too late and that students were unwilling or unable to arrive at school early enough to eat breakfast. Other reasons included: school staff were opposed to providing breakfast in the classroom (49%); the breakfast period did not provide enough time for students to eat (40%); and students did not wish to be perceived as "poor" by participating in breakfast (33%) (FRAC, 2002). Other researchers have shown that perceived welfare stigma might affect students' willingness to take advantage of the SBP (Gleason, 1995; Kennedy & Davis, 1998).

The Problem

Confronted with a low breakfast participation rate, a school foodservice director in Pennsylvania joined forces with university researchers to study the relationship between alternative service strategies and breakfast participation. The basic problem to address was how to increase participation in the SBP in a suburban middle school with low student eligibility for free and reduced-price meals. The school enrolled 892 students in Grades 6 through 8. Fifteen percent (136 students) were certified for free and reduced-price meals, but only 4% of the total student population ate breakfast at school.

The Solution

The district's school foodservice director, school administrator, cafeteria manager, school custodian, and researchers formed a project team to address the problem. Donated funds for equipment and capital improvements for the project were received from the American Dairy Association and Dairy Council Mid East, Mid-Atlantic Dairy Association, and the Pennsylvania Department of Agriculture.

At this particular middle school, the project team chose not to address morning bus schedules, which experts listed as the primary problem, but to concentrate on other critical areas that could be addressed directly by the school foodservice program. The group focused on designing a way in which to improve service anonymity, as well as the effectiveness of the SBP.

It was apparent to the project team that the physical layout of the school presented a potential barrier. Students entered school from the bus unloading area into a main traffic aisle that flows

into an atrium near the school's administrative offices. The cafeteria is located on the right of this traffic aisle, separated by a wall of windows. If students wanted to eat breakfast, they must walk through the dining area to the serving line and cashier's station. All students at the cashier's station entered a number associated with a pre-paid debit system to protect the anonymity of those receiving free and reduced-price meals. The school's administration had made a previous decision to restrict morning access to the dining area to only those students who ate breakfast. Due to this policy and the clear view from the atrium and hall of all who ate breakfast in the dining area, many middle school students surmised, correctly or not, that students in the dining area were getting a "welfare" meal.

Grab 'n' Go Service

One strategy to increase participation, suggested by the School Food Service Foundation (currently, the Child Nutrition Foundation), is to bring breakfast to all students through an alternative to the traditional cafeteria line called grab 'n' go. As described in a Foundation publication, this service attracts students to temperature-controlled carts located in main traffic areas remote from the cafeteria. School foodservice employees can offer breakfast food, milk, and juice before and, occasionally, between morning classes. Once the food items are obtained, students can consume them on their way to class or eat their meal during the first class period (School Food Service Foundation, 2001).

In the case of this middle school, the atrium within the main traffic aisle was an ideal area to serve a grab 'n' go breakfast. The plan included suspending regular service in the cafeteria so the grab 'n' go service would be the only source of school breakfast. In this setting, all children would be presented with the opportunity to eat breakfast as they walked to their homerooms.

Capital Improvements and Equipment

The most important issue to solve in developing this service was the ability to use the computerized cash register in the new area. The project team wanted the new service to be sustainable, so no attempt was made to offer a free breakfast for all students. The computer system was required to maintain proper record keeping, and without this computerization, the anonymity of using pre-paid debit system would be negated at the point of sale. Donated funds were used to bring the computer network wiring into the atrium, cost of approximately $700, which was the largest single capital expenditure necessary to make the grab 'n' go service a reality. Additionally, a milk cooler was donated by the Dairy Council. The school foodservice program already had received a portable serving line from a previous grant that could be used for the grab 'n' go breakfast line. The project team considered purchasing larger trashcans, but found that the current size was suitable when extra liners were provided.

Staff Support

The school principal had been involved in the decision to investigate the impact of an alternative breakfast service in the middle school from the beginning. After determining equipment availability, the next step in the project was to elicit support for the project from the school staff who would be affected by the new service, particularly teachers and custodians. The project team met with the school administrative council about the proposed breakfast service. The council was composed of an administrator, teachers, administrative assistants, and a custodian. The teachers spoke about having enough time to eat, messes in classrooms and halls, inadequate size of

trashcans, and disruptions to first period classes. Interestingly, the custodian did not seem to think the grab 'n' go service represented an excessive burden to him in relation to the potential benefit to students. Despite the concerns expressed, there was sufficient support from the teachers and others on the council to move the project forward. The school foodservice director and the administrative council agreed the alternative breakfast service would begin the last month of the school year. This allowed a natural ending to the pilot program in the event it was determined to end.

Food and Labor Costs

In order to facilitate the speed of service at the grab 'n' go station, offer versus serve regulations were suspended. Although breakfast food items did not change from what was offered in the cafeteria, more items were incorporated into the meal than what was chosen, on average, by students under offer versus serve. As a result, average breakfast food costs were increased by 19 cents per meal. However, on a positive side, serving the additional breakfast food components resulted in meeting all nutrient goals for meals served, which was not the case under offer versus serve regulations. The grab 'n' go service required one additional hour of labor per day for set-up of the grab 'n' go station. The same employees who served as cashier and server when the breakfast was offered in the cafeteria worked the new grab 'n' go station.

Supply Costs and Trash Removal

Foodservice staff did not bag breakfast items prior to service. Students were offered several choices of food items, which they bagged themselves. The cost of each bag was approximately nine cents. As predicted by the custodian, the handling of extra trash in the classroom was not a problem. He placed one extra trashcan liner on each homeroom teacher's chair for morning trash collection. Neither teachers nor custodians complained about excessive mess generated by the grab 'n' go service.

Advertising and Promotions

At least two weeks before the grab 'n' go service began, signs about the alternative breakfast service were posted throughout the school cafeteria and the atrium area of the school. A letter was sent home to parents announcing the service in hopes of generating their excitement and encouragement of their children to eat breakfast at school. Through the use of donated funds, the project team also was able to offer a "kick-off" free breakfast to all students and staff at the school on the first day of the new breakfast service. School foodservice employees delivered 1,038 bagged meals and milk on the first day to homerooms. The second day began the actual grab 'n' go service in the school atrium.

Participation

The average daily attendance at this school is relatively stable, which was the case from 2001 to 2002. As it was the end of the school year, eating patterns annually change during this time and the researchers used breakfast participation data from May 2001 in order to determine whether a change in participation could be associated with the grab 'n' go service. Table 1 shows an increase in breakfast participation from May 2001 to May 2002. A t-test assuming unequal variances was conducted using the SAS statistical package, version 8.02. Participation rates in May 2002 increased overall and in each meal category relative to May 2001. The most notable

increase was in the paid meal category (t[24 d.f.]=22.96; p< 0.000), but this group of students was the largest and had the greatest growth potential.

Table 1. Means and standard deviations for participating students in the School Breakfast Program by pay categories (May 2001 and May 2002)

Pay Categories	2001 (M + sd)	2002 (M + sd)
Free	25 ± 3.2	30 ± 5.4a
Reduced	2 ± 1.4	4 ± 1.6b
Paid	7 ± 2.4	47 ± 7.6c
TOTAL	35 ± 3.9	81 ± 11.3d

a t(32 d.f.) = 3.59, p< 0.001
b t(38 d.f.) = 3.37, p< 0.002
c t(24 d.f.) = 22.96, p< 0.000
d t(24 d.f.) = 17.86, p< 0.000

An interesting finding was the effect on the other meal categories. Student breakfasts also significantly increased for free (t[32 d.f.]=3.59; p< 0.001) and reduced-price meals (t(38 d.f.]=3.37; p< 0.002). The total impact of the project was to increase May 2002 breakfast participation by approximately 2.5 times the participation in May 2001, or an increase in the breakfast participation rate of approximately 9%.

CONCLUSIONS AND APPLICATION

The project team considered the grab ‘n’ go service a success. Teachers and teachers’ aides (N = 74) rated their opinions on a Likert-type scale (strongly disagree=1 to strongly agree=5) concerning whether the grab ‘n’ go service should be continued in Fall 2002, 69% agreed or strongly agreed with continuing the grab ‘n’ go service. Only 7% disagreed or strongly disagreed that the service should be continued, and 24% were neutral.

The school foodservice director favored continuing the grab ‘n’ go service the following school year. The cafeteria manager and foodservice employees supported the new service, and the percent increase in participation, although not outstanding in the strict sense of the numbers, was moving in the right direction and was expected to make a difference in the eating habits of more middle school children. Rather than make adjustments in food and labor costs, the foodservice director decided to increase the price of the meal and portion sizes of some food items, while continuing to serve all breakfast meal components in order to enhance calories, calcium, and other target nutrients.

Two questions come to mind when evaluating this project: Will the results be sustainable, and what factors might contribute to its reproducibility in other school districts?

In May 2003, an average of 67 middle school students per day in all meal categories elected to eat breakfast from the grab ‘n’ go carts in the school atrium. While the rate of breakfast participation had not been maintained at the 2002 rate, participation in 2003 was almost double that of May 2001 (Table 1). For paying students, cost undoubtedly played a role in the reduction of 2003 breakfast participation from 2002 levels. Gleason (1995) found that paying students were very price sensitive. He observed a reduction in participation of 3% with an increase of 20 cents in price. The cost of breakfast in this middle school was increased by 50 cents, yet the participation rate of students was only 1% lower than the 2002 rate.

A bigger story was the sustainability of participation by students in the free and reduced-price meal categories. Of 2003’s total, the average number of students in the paid and free meal categories were equal in number (28), which had not been the case prior to the grab ‘n’ go service. An average of 11 students in the reduced-price category ate breakfast in May 2003, which was an increase over May 2002. These findings reinforce issues of access and anonymity for economically disadvantaged children. School foodservice directors should consider grab ‘n’ go service to increase breakfast participation in general, but also view this type of service as a way to promote access for all children. Taking an obvious walk to the cafeteria may, for some students, be sufficient disincentive, causing them to forego the most important meal of the day.

The second question focuses on reproducibility. This project was helped through a donation of funds for capital improvements and equipment. Other school foodservice directors similarly may find sources of support for alternative breakfast service in their regions or communities. Regional Dairy Councils may offer small grants to begin this type of program and also may furnish portable serving and milk carts for the project. Action for Healthy Kids (AFHK) teams in each state also have funds to promote state goals for enhancing healthy school environments. If a school foodservice director’s state has targeted breakfast participation as one of their AFHK goals, this would be the place to inquire about assistance with these types of expenses (Action for Healthy Kids, 2003).

Developing service systems and communication channels are two additional hurdles to overcome when initiating a grab ‘n’ go service. The National Dairy Council and the School Food Service Foundation joined forces in publishing a resource entitled *Expanding Breakfast* (2001). This material delineates many helpful strategies and provides worksheets to develop alternative service styles for breakfast, including grab ‘n’ go service. In addition to these resources, Table 2 lists issues to consider when developing a grab ‘n’ go project. With available materials and an increase in communities supporting sound eating habits, a school foodservice director should find plenty of help in starting this type of breakfast service.

Table 2: Issues to Consider and Suggestions for Implementing a Grab ‘n' Go Breakfast Service

Issues to Consider	Suggestions
Continuing payment system in remote location. System to record paid, free, and reduced-price	Look for electricity in area for grab ‘n' go service for cash registers needed to maintain

meals must be maintained.	record system. Cost will depend on presence and location of wiring, but may be less than $1000.
Portable serving and milk carts.	Investigate grants from state, local Dairy Council and/or local breakfast food and milk vendors.
Trashcans	Work with custodial staff to determine whether more or larger trashcans should be purchased. Definitely plan on increased use of trashcan liners and determine whether this will be a school or foodservice cost.
Menu	Consider prepackaged items and weigh the cost of food versus labor in this decision. For “kick off” day consider the school staff’s perception of food offered. Teachers will be more supportive of a breakfast that offers a bagel or muffin than a sweet roll even though calories and nutrients are equivalent. Perception is 99% of reality.
Administration’s support	The principal is the key person to join the team. Talk to the principal about the role of breakfast in helping students become better prepared to learn and better able to maintain sound eating patterns throughout the day to help weight management.
Teaching and custodial staff’s support	Elicit support from these personnel in a session such as an administrative council where key stakeholders are present. Form alliances with key teachers with influence on other teaching staff with regards to this issue such as coaches, health or family and consumer sciences teachers.

Data collection for evaluation	Keep track of key indicators such as participation rates and costs before initiating the service and after. Share results with school administrators and school board.

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