

THE EFFECT OF A SOCIAL MARKETING CAMPAIGN ON THE SALES OF HEALTHY  
REFRESHMENTS IN PARK AND RECREATION FACILITIES

by

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(Under the Direction of Pamela Orpinas and Marsha Davis)

ABSTRACT

Georgia Recreation and Park Association (GRPA) adopted a resolution to make healthy items available at their park sites across the state. This study examined the development, implementation, and impact of a social marketing campaign designed to accompany the new policy in six self-selected, pilot GRPA sites to better understand the factors that influence whether or not parents and children purchased healthy foods from the concession stands. Fruit and water sales data were tracked throughout the intervention and a parent survey was used to examine factors related to the Health Belief Model to determine if they had any influence on whether or not parents and children purchased healthy foods. Differences in fruit and water sales during the pre-social marketing campaign period and intervention were insignificant, but sites that experienced higher sales of healthy items shared some characteristics. Parent surveys revealed misconceptions about healthy foods and the need for more nutrition education in similar community-based programs.

INDEX WORDS: Social marketing, Program implementation, Program evaluation, Community-based research, Health Belief Model, Healthy refreshment policy, Childhood obesity

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## CHAPTER 1

### INTRODUCTION

This study examined the development, implementation, and impact of a social marketing campaign designed to accompany a new policy of the Georgia Recreation and Park Association (GRPA). GRPA sites are making healthy items more readily available in response to a resolution adopted by the GRPA Board. The resolution encourages the healthy refreshments and the promotion of healthy items among families that frequent the sites. The GRPA signed the resolution into effect in March of 2006 in response to the nation's childhood obesity epidemic. The policy focused on increasing healthy food sales in recreation and park facilities. The goal of this study is to understand the factors that influence whether or not parents and children purchased healthy foods from the concession stands and to investigate the effects of a social marketing campaign that promoted healthy choices, specifically fruit and water, at concession stands in GRPA sites.

This introduction is composed of three sections. The first section provides an overview of the magnitude and consequences of the problem of overweight and obesity in the United States. The second section examines current research on prevention of childhood obesity. The last section lists the research questions.

#### Background on Overweight and Obesity

Overweight and obesity are defined as having an excessive amount of body fat or adipose tissue in relation to lean body mass (CDC, 2006). Overweight status places an individual at higher risk for premature morbidity and mortality, because it could lead to diabetes, high blood pressure, heart disease, osteoarthritis, and some cancers. These health risks are positively correlated with the severity of the individual's obesity, which translates into increased medical care costs (Wadden, Brownell, & Foster, 2002).

In the last 20 years, the prevalence of obesity has been increasing at an epidemic rate, and the situation continues to worsen. According to the Third National Health and Nutrition Examination Survey (NHANES III, 1988-94), 22.3% of U.S. adults aged 20 years and older are obese. In Georgia, the Department of Public Health reported that 28% of adults were classified as obese in 2008. Since 1984, when the Behavioral Risk Factor Surveillance System (BRFSS) started to be collected, overweight and obesity have risen an average of 3% per year. Approximately 10% of all deaths in Georgia are caused by medical conditions that are induced by excess body fat, such as heart disease, stroke, some cancers, and type 2 diabetes, and the medical cost of obesity in Georgia is about \$2.4 billion per year (GADHR, 2009; GADHR, 2005).

In addition to the obesity rates in adults, childhood obesity rates in the United States have also increased (CDC, 2008). Obesity is a severe problem for Georgia's children. A 2005 Oral Health Screening in the state revealed that one in four third graders were obese. Girls were more likely to be obese than boys and Black children were more likely to be obese than White children. Additionally, children from low socioeconomic (SES) households were more likely to be obese than those from high SES households (Falb & Kanny, 2006). In middle school, one in three students was overweight or obese in 2003. At the high school level, more than one in four students were at overweight or obese (GADHR, 2005).

Although factors at multiple levels (social, behavioral, physiological, metabolic, cellular, and molecular) have been linked to obesity, the etiology of obesity can largely be attributed to "toxic environments" (Battle & Brownell, 1997, p. 757; Wadden, et al., 2002). The nation's obesity epidemic can vastly be attributed to long-term energy imbalance (consumption of more calories than those being burned). The environments that are most conducive to obesity are developed societies where mechanized transportation is readily available; thereby, reducing physical activity, and where there is access to abundant food, especially convenience, energy-dense, fast foods that are heavily advertised and

inexpensive (Wadden, et al., 2002). These calorie-laden foods with little or no nutritional value, such as potato chips, candy, cookies, and sugary beverages, are often called “junk foods.”

Children have become products of their “toxic environments.” Their screen time (i.e., time spent in front of televisions, computers, and video games) has increased substantially in recent decades. At the same time, the availability of calorie-dense, low-nutrient value foods and drinks and the advertisements promoting the consumption of these products is also continually on the rise (Dietz & Gortmaker, 2001). Children’s exposure to and consumption of sugar-sweetened beverages has greatly increased in recent decades, coinciding with the obesity epidemic (Harnack, Stang, & Story, 1999; Tordoff & Alleva, 1990). Per capita sugar-sweetened beverage consumption doubled across all age groups between 1977 and 2002 (Brownell, et al., 2009). Ludwig, Peterson, and Gortmaker (2001) state that the risk of overweight among youths increases 60% for each serving of these beverages consumed per day.

#### *Prevention of Childhood Obesity*

Although numerous obesity treatment and prevention programs have been carefully designed, very few successful models exist to date. Most traditional approaches to childhood obesity prevention aim to increase nutrition education in schools or communities and/or time spent engaging in physical activity. Although many of these programs have shown positive initial effects, the results tend to be modest and short-lived (Stice, Shaw, & Marti, 2006; Thomas, 2006; Wadden, et al., 2002). In fact, a meta-analysis of 64 prevention programs revealed that only 21% produced statistically significant intervention effects. The average effect size for Body Mass Index (BMI), was very low for all 64 programs ( $r = .04$ ), but among the 21% with significant effects, the effect size was medium ( $r = .22$ ,  $p < .001$ ) (Stice, et al., 2006). The meta-analysis found that some program features were associated with the largest effects.

First, age of the children was important. Programs targeting younger children (i.e., elementary school level) usually showed better long-term results than those with an older target audience, which

seems counter-intuitive since young children may find it difficult to understand nutrition concepts, and they are not likely to make decisions about food purchases.

Second, parental involvement was also important. Parents play an important role in obesity prevention efforts in young children because parents can modify the dietary intake of younger children by making healthy options more readily available (Stice, et al., 2006; Story, 1999). Children at this age are shaping their life-long eating habits, while being bombarded with advertising for calorie-dense junk foods. Therefore, reaching them and their parents with accurate nutrition information at a young age may be pivotal to prevent adulthood obesity (Dietz & Gortmaker, 2001).

Also, programs that target reducing fat and sugar intake, while increasing fruit and vegetable intake may be more effective than those only targeting one behavior. Epstein and associates' (2001) research resulted in a slight increase (+0.47 or slightly less than a half-serving per day) in fruit consumption among children participating in an intervention to increase fruit and vegetable intake. Those studies that go a step further and actually manipulate the food environment (e.g., change nutritional quality of school lunches) have significantly reduced participants' dietary fat intake, but very few interventions take this extra step. Among the best interventions, even when the outcomes are statistically significant, the practical significance of the results is very small. The Child and Adolescent Trial for Cardiovascular Health (CATCH) intervention, for example, altered the food environment in experimental schools and the result was a decrease from in self-reported daily energy intake from fat from 32.7% to 30.3% among students in the intervention schools and only from 32.6% to 32.2% ( $P < .001$ ) in control schools (Luepker, Perry, McKinlay, Needer, & Parcel, 1996).

Wadden and colleagues (2002) hypothesized that childhood obesity programs have such modest effects because most do not address environmental factors, such as availability of high-fat, low nutrient quality foods and drinks and access to safe and close-to-home places to engage in physical activity. They argue that researchers should use public policies to influence the obesity epidemic. Some of these policies could be aimed at regulating food advertising that target children, subsidizing the sale of healthy

foods, reducing availability of unhealthy foods, and making healthy foods available to children at schools and other places they frequent, and providing physical activity resources (e.g., facilities and opportunities to be active).

### Research Questions

Because policy-level change holds promise for reducing the childhood obesity epidemic in this country, the goal of this study is to examine the impact of implementing a program to help promote a policy to make healthier food choices available at recreation and park facilities in Georgia. Although GRPA passed a resolution that included this policy, GRPA sites had no mechanism in place to implement the policy and ensure its success. Therefore, the availability of the nutritious foods was promoted using a social marketing campaign, and this study examined the factors that influenced whether or not parents purchased the healthy foods. The study's research questions are: 1) Does a social marketing campaign at concession stands increase the sales of healthy refreshment options (i.e., water and fruit)?, 2) Which constructs of the Health Belief Model are most strongly associated with parents' selection of healthy food choices?, 3) What promotional strategies of the social marketing campaign raise parents' awareness about healthy choices?, and 4) What site-specific characteristics predict successful campaign implementation?

To answer these questions, this study tracked sales of water and fruit during a 2 week pre-social marketing campaign period and throughout the remaining winter season, while the social marketing campaign was used. The social marketing materials included point-of-purchase signage, letters to parents, and press releases. In addition, data from parent surveys identified factors influencing concession purchases. Finally, a survey of the site personnel assessed site-specific characteristics.

## CHAPTER 2

### LITERATURE REVIEW

This chapter is composed of four sections. Section one describes the risk factors for overweight and obesity, focusing on those related specifically to children, such as high consumption of junk food and sugar-sweetened beverage and low intake of fruits and vegetables. Section two provides an overview of several point-of-purchase interventions in various settings that promote healthier foods and beverages. The selected settings were universities, worksites, restaurants, and schools. Section three presents the theoretical perspectives used in this study. The final section highlights the importance of evaluating program implementation and collecting process data when conducting intervention studies.

#### Risk Factors for Overweight and Obesity

Overweight and obesity, as well as many other chronic diseases, can be attributed to several different risk factors. Table 2.1 details several of the risk factors that researchers have consistently linked to obesity and overweight. Some of these factors are non-modifiable, such as genes and diseases, but may interact with the environment. However, a vast majority is lifestyle-related and is, therefore, modifiable. This study focuses on several of these modifiable risk factors, such as children who consume junk foods and drinks and environments that promote unhealthy eating (i.e., lack of available healthy foods and drinks). In addition, the study describes the importance of formulating and promoting policies targeting obesity prevention and reduction.

**Table 2.1 Risk Factors for Overweight and Obesity**

<b>Risk Factor</b>	<b>Explanation</b>	<b>Reference</b>
Consumption of too many calories, especially from junk foods, leading to an energy imbalance	High consumption of fast foods, pre-packaged foods, soft drinks, fat-free foods that still have calories, and increased portion sizes. Cultural factors may influence amount and types of food consumed.	Cummings, Parham, & Strain, 2002; Rippe, Crossley, & Ringer, 1998; Ravussin, Fontvieille, Swinburn, & Bogardus, 1993
Sedentary lifestyle leading to an energy imbalance	Most Americans are sedentary. Technology makes time and labor saving products: people drive more, walk less, use elevators and escalators instead of stairs, and sit in front of TVs and computers several hours per day. People think that only vigorous exercise count towards burning calories or that physical activity is limited to sports or exercise, which keeps them from being active. Cultural factors may affect amount of leisure-time physical activity individuals participate in.	Rippe, et al., 1998; Ravussin & Bogardus, 2000
Environment that promotes a sedentary lifestyle and/or an unhealthy diet	Lack of sidewalks, unsafe areas to go for exercise, lack of worksite wellness center, and bad weather in certain areas promote a sedentary lifestyle. Lack of access to healthy foods, abundance of fast food and foods full of empty calories promote unhealthy eating.	Cummings, et al., 2002
Psychological factors	Binge eaters may eat in response to stress, sadness, boredom, childhood abuse, or anger.	Williamson, Thompson, Anda, Dietz, & Felitti, 2002
Genes	Bardet-Biedl syndrome and Prader-Willi syndrome; multiple genes may increase one's susceptibility for obesity but require outside factors, such as abundant food supply or little physical activity to develop; insensitivity to leptin.	Anderson & Wadden, 1999; Ravussin & Bogardus, 2000
Illnesses	Cushing's disease and polycystic ovary syndrome (PCOS)	NIH, 2000
Gestational influences	Glucose exposure in infants of obese diabetic mothers has been linked to increased birth weight and consequently obesity development.	Gillman, Rifas-Shiman, Berkey, Field, & Colditz, 2003
Drugs/ Medications	Steroids and some anti-depressants may cause weight gain.	Speiser, et al., 2005
Socioeconomic status (SES)	Low SES is strongly associated with increased prevalence of obesity in high income countries. Higher obesity rates in lower SES individuals has been linked to limited access to nutrient-dense foods, high availability of junk foods, being less attentive to weight status, and less access to safe areas for physical activity.	Pena & Bacallao, 2000



Food availability and portion size are major modifiable contributors to the United States' obesity-promoting environment and, to fight the obesity epidemic, researchers and practitioners must find ways to change environmental factors. Hill and Peters (1998) suggested two steps to influence obesity at the environmental level. The first step is to increase the availability and affordability of healthy foods (i.e., foods that nutrient dense and low in fat), such as fruits, vegetables, and whole grains, since the presence of healthy foods is expected to influence social norms related to healthy eating (Brownson, Haire-Joshu, & Luke, 2006). The second step is to encourage young children to eat healthy foods, since dietary patterns develop early.

Although changing the environment may seem like an insurmountable challenge, history shows that large-scale changes are possible. For example, in 1971, the Surgeon General first called for a ban on smoking in public places. Since that time, laws, regulations, and policies have had a significant impact on the smoking environment in the United States. Not only have these regulations reduced the amount of exposure individuals have to secondhand smoke, but they have also changed social norms about smoking, which has resulted in a decrease in the number of smokers in this country (Brownson, et al., 2006; Zaza, Briss, & Harris, 2005).

Smoking bans are not the only environmental influencers that have reduced smoking rates. Pricing and promotion are other important environmental components. For example, increasing the price of cigarettes decreases the demand for them. In fact, when cigarettes prices rise by 10%, demand for cigarettes reduces by 3% to 5%. Promotion, in this case, is negative: product warning labels. Although the current warning labels on cigarettes have not been particularly effective, other countries that require the use of more colorful and graphic warning labels have been able to influence smokers' attitudes and behaviors (Brannstrom, Weinehall, Persson, Wester, & Wall, 1993; Brownson, et al., 2006; Martens, 2002)

## Point-of-Purchase Interventions

In regards to obesity reduction policies, researchers have studied the effects of healthy eating policies at universities, worksites, restaurants, and schools. Most of these studies use point-of-purchase prompts as a strategy to promote healthy choices. A point-of-purchase prompt is any form of product advertising (e.g., flyer, arrow, display, and/or label) used at the place where a customer is making a decision about what to buy. Some interventions included promoting healthy options, others focused on pricing strategies, and others combined both components. The main outcome variable for most of the studies is the sale of healthy foods and/or beverages. However, some authors measure process variables, such as customers' exposure and reaction to intervention materials. Very few studies focus on community-based settings as potential sites for nutrition policy implementation. This study is intended to help fill that gap in the literature.

### *University Studies*

Bushcer, Martin, and Crocker (2001) evaluated how point-of-purchase signage in a cafeteria influenced the sales of healthy food options among university students. During an 8 week intervention, point-of-purchase prompts promoted vegetables, pretzels, yogurt, and fruit baskets. These prompts included both large posters at the cafeteria entrance and two smaller labels in front of the targeted food. Yogurt and pretzel sales increased significantly during the promotion weeks, but the fruit and vegetable basket sales did not increase. The authors indicated that price may have been a factor, since the fruit and vegetable baskets were more expensive than the pretzels and yogurt. The researchers also conducted intercept surveys with some of the students who ate the cafeteria after the 2-week intervention promoting only yogurt. Respondents did not recall the labels placed directly in front of the yogurt but most (58%) recalled seeing the poster. In addition, most respondents indicated that signs simply served as a good reminder to select these foods but did not pressure them to do so (Buscher, et al., 2001).

Cinciripini (1984) used point-of-purchase monetary incentives, in the form of rebate stamps and information (e.g., posters, labels on healthy items, leaflets, and nutrition information) to persuade students

to select fruits, vegetables, low-fat dairy items, chicken, fish, turkey, and salad. In this study, the stamps were the most successful strategy for promoting the healthy foods.

Davis and Rogers (1982) used only point-of-purchase information, without any financial incentives, to influence students to buy nonfat milk rather than whole and low-fat chocolate milk. Sales data indicated significant increases in gallons of nonfat milk sold and significant decreases in whole milk and low-fat chocolate milk sales.

### *Worksite Studies*

In several studies, researchers have changed the menus at worksite cafeterias to examine which healthful changes alter customers' food choices. French and colleagues (2001) recognized that the consumption of convenience foods, such as those available in vending machines, contribute to high fat dietary intake. However, they also saw vending machines as convenient locations for environmental nutrition interventions. Therefore, they designed a study to examine how pricing and promotion strategies would influence the selection of low-fat food choices in vending machines located at various community sites. These researchers found that lowering the prices of low-fat vending snacks significantly increased the sales of these items. Price reductions of 10%, 25%, and 50% resulted in low-fat snack sales increases of 9%, 39%, and 93%, respectively. Moreover, strategies to promote low-fat snacks, such as signs labeling low-fat choices and/or signs encouraging people to buy low-fat snacks, resulted in a statistically significant increase in the number of low-fat items purchased from the vending machines.

Levin (1996) used point-of-purchase information to promote low-fat entrees in the cafeteria. Researchers marked the targeted items with a heart symbol and used an experimental design to compare sales of the items. At baseline, sales of the low-fat entrees at the control and intervention worksites did not differ, and the sales of these items did not change in the control cafeteria. However, sales of the labeled dishes did increase significantly ( $p < 0.001$ ) at the intervention sites. In addition, 46% of the consumers who noticed the heart labels indicated that the symbol influenced their purchases.

In another worksite study focusing on cafeteria foods, researchers worked with the management to increase the selection of fruits and salad bar choices and reduce the prices of each by 50% for a 3-week intervention period. They used signs and flyers to advertise the program. Fruit and salad purchases increased about three times above baseline levels during the intervention. However, one of the limitations of this study and those mentioned above was that researchers could not determine the intervention effects of having more healthy choices versus decreasing prices independently (Jeffery, French, Raether, & Baxter, 1994).

When considering responses to point-of-purchase nutrition education, researchers have examined why people respond in different ways. In some cases, the educational piece may be ineffective because it is too complex or lacks sufficient appeal to grab a consumer's attention amidst the other options (Jeffery, et al., 1994). Alternately, promoting certain items as "healthy" may make consumers wary of how the foods will taste, which could actually compromise the sales of these items (Horgen & Brownell, 2002). In other words, consumers may think of healthful foods as being less attractive than the higher-fat, often lower-priced, alternatives.

### *Restaurant Studies*

To better understand the influences of pricing versus promoting of healthy food items, Horgen and Brownell (2002) designed a restaurant-based intervention to test effects of price and health messages independently and combined on several food choices. Sales data were collected at five points in time: 1) initial baseline, 2) price decrease intervention, 3) an interim baseline (i.e., prices raised to baseline levels), 4) health message intervention, when the health message intervention was combined with a price decrease, and 5) a final baseline. Although sales of the healthy items did increase significantly above baseline sales during the health message intervention, the increase was not significantly higher than the sales at the interim baseline. However, when the health messages were combined with pricing strategies, sales were significantly higher from initial baseline and the interim baseline. In fact, the combination intervention produced the highest increase in sales for two of the promoted healthy options. On the other

hand, decreasing price alone had a stronger effect on the sales of two different targeted food choices than the combination intervention.

Albright and colleagues (1990), Anderson and Haas (1990), and Scott and associates (1979) all used only point-of-purchase information to promote healthy options in restaurants, with mixed results. Albright and colleagues used menu labeling and tip sheets to promote low-fat/low-cholesterol items at four restaurants in California. The four-week intervention significantly increased ( $p<0.05$ ) the sales of healthy choices, but only at two of the four sites. Anderson and Haas (1990) included 53 restaurants in Colorado, but only nine of these restaurants provided researchers with pre and post-intervention sales data, which revealed increased sales of 52 of the 58 entrees that qualified for a heart decal based on nutrition criteria. On the other hand, Scott's (1979) study, in a Texas steakhouse, did not have a statistically significant effect on the sales of lower cholesterol foods over a 12-month period. The author hypothesized that the food sales of the targeted items may not have increased significantly because individuals eating at a steakhouse may not be concerned about making healthy dietary choices.

#### *School-Based Studies*

Schools have traditionally been a popular location for environmental approaches to promote healthy eating, because approximately 52 million children attend school in the United States (Brownson, et al., 2006). Additionally, children consume a large proportion of their daily energy at school (French, Story, Fulkerson, & Hannan, 2004). Many school-based interventions have shown increases in fruit and vegetable intake and decreases in fat intake. Others have shown greater number of students selecting healthier food options. However, these results are typically modest. These improvements may be small because most interventions promote healthy choices, while high fat and sugar foods are still available. Reducing the price and promoting healthy items may increase the success of school-based healthy eating programs.

The National School Lunch Program is in place to provide nutritionally balanced meals to children attending public schools. Most schools also sell foods outside of this program (called

“competitive foods” or “a la carte” foods), which are usually higher in fat and calories than those provided as part of the School Lunch Program. Unfortunately, an increasing number of students are purchasing these unhealthy alternatives (French, et al., 2004).

In a 2-year group randomized school-based nutrition intervention, researchers measured the sales of healthier competitive foods (i.e., having 5 grams of fat or less per serving) when more of these healthy choices were made available and promoted using peer promotions designed by students in experimental schools versus control schools (French, et al., 2004). The sales of lower-fat foods were significantly higher in the intervention schools than in the control schools. In addition, the intervention schools offered a higher number of healthy choices than the control school, and students at the intervention schools reported that they perceived a higher availability of low-fat foods and support from peers and parents to purchase these items.

The intervention of another randomized (delayed control) school-based trial (Perry, Bishop, & Taylor, 1998) had several components: point-of-purchase promotions, more attractive fruits and vegetables, a greater variety of produce, and an extra fruit item on days when baked desserts were offered to encourage students to select fruit and vegetables from the cafeteria serving line at elementary schools. Researchers conducted direct lunchroom observations and 24-hour recalls to assess dietary intake of fruit and vegetables among students. The observations showed significant increases in the intervention schools as compared to the control schools for servings of fruits and vegetables combined and servings of fruit alone, but not for servings of vegetables alone. In the 24-hour recalls, the number of fruit servings consumed was significantly higher in the intervention schools than in the control schools.

Instead of cafeterias offering healthier choices, researchers in the Pathways study provided food service personnel in the intervention schools with nutrient guidelines and recommendations on how to lower the fat in the meals they plan, purchase, and prepare (Caballero, et al., 2003). After the training, nutrient analysis of the menus showed that calories from fat was 28% at the intervention schools and 32% at the control schools. Project researchers indicated that although the food service personnel made the

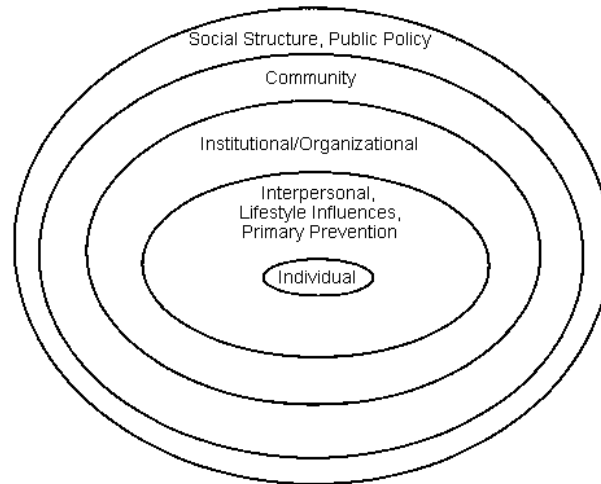
menu changes slowly, once they implemented the modifications, the food service personnel and students liked the changes. Availability is the environmental factor that is linked to healthier food choices. Past studies have shown that when healthier foods are readily available in grocery stores or schools, individuals are more likely to eat these foods, especially when few alternatives are available. For example, a study of the National School Lunch Program revealed that children who ate these meals provided at school ate more nutritious lunches than those who did not eat a school meal. However, when these children had access to vending machines and snack bars, they were less likely to participate in the school lunch program. More specifically, middle school children who had access to a snack bar during their lunch period ate 25% less fruits and vegetables than students who did not have access to the snack bar (Cullen, Eagan, Baranowski, & Owens, 2000).

### Theory

The present study used the socio-ecological model as an overarching guide, because the intervention components targeted interpersonal, intrapersonal, and institutional/organizational spheres of influence. At the interpersonal level, the Health Belief Model helped understand parents' perceived levels of susceptibility and severity related to childhood obesity and their children. The parents' perceived barriers, benefits, cues to action, and self-efficacy for healthy eating were also examined. Social Marketing Theory guided the intervention at the institutional/organizational level.

### *Socio-ecological Model*

The socio-ecological model (McLeroy, Bibeau, Steckler, & Glanz, 1988), in particular, could be used as a framework for designing and implementing obesity prevention programs. This model asserts that health behaviors are based on five levels of influence: individual, interpersonal, organizational, community, and society (Figure 2.1). According to this model, the environment, which is composed of many settings, shapes individuals. For interventions to be most effective, several levels of influence need to be included (Bronfenbrenner, 1979).



**Figure 2.1 Socio-ecological model spheres of influence**

In childhood obesity prevention, children's intrapersonal influences on eating behaviors may include taste preferences (Capaldi, 1996), as well as knowledge about and attitudes towards healthy foods. At the interpersonal level, children's parents may influence their eating habits by making certain foods available and role modeling eating behaviors. Some interventions based on the socio-ecological model, such as CATCH, included components to target these intrapersonal and interpersonal factors (Nader, et al., 1996). Parent-based interventions often educate parents about healthy choices for their children and the risks associate with childhood obesity. Interventions may also focus on improving parents' self-efficacy for selecting healthier food choices for their families and/or preparing healthier meals. Schools and other institutions that children frequent may also influence children's eating habits, by making healthy food available and reducing its price (French, et al., 2001). Availability and pricing of healthy foods are also important at the community level. At the policy level, many consumer advocacy groups, such as Center for Science in the Public Interest (CSPI), lobby for nutrition policies. Nutrition standards for school lunch programs and nutrition labels on all packaged foods are examples of nutrition policies (CSPI, 2007).

The number of obese children in this country is increasing, and the interventions that have been tested are not substantially impacting this epidemic. Many current interventions may be targeting



children, their families, and/or schools, but most do not include all of these spheres of influence. The majority of current obesity prevention efforts provide participants the knowledge and skills that researchers believe are necessary for individuals to change their beliefs and attitudes about healthy eating and, ultimately, their eating habits. However, more comprehensive approaches to the problem may be necessary. With parallel work at community and institution levels, obesity prevention efforts may better reinforce individual decision-making about dietary choices (Burnet, Plaut, & Chin, 2002).

Researchers have clearly documented that environments directly affect health. The socio-ecological model outlines several processes that may be involved in persuading individuals to adopt healthy behaviors. One of these processes is providing environmental cues, such as signs, to encourage healthy behaviors. Another environmental cue is as making healthy items readily available to individuals and restricting access to less healthy items (Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003).

Making changes in children's environments is especially important because they may not have fully developed the cognitive skills they need to make healthy choices. Moreover, some youth may feel that they are not vulnerable to diseases or that the threat is distant; thus, they do not need to be concerned with it (Burnet, et al., 2002). By using strategies that change the conditions in which the behaviors occur, researchers may be better able to guide dietary patterns than if they simply attempt to increase young people's knowledge about healthy eating (Richter, et al., 2000).

In fact, some studies have linked availability of healthy food items and their consumption. For example, Cheadle and colleagues (1991) found that when grocery stores devoted more shelf space to low-fat dairy foods, people living in the surrounding areas consumed these products more regularly. Edmonds and colleagues (2001) found similar results when examining the fruit and vegetable consumption of African-American boys: Consumption was higher for those boys who lived in areas where restaurants sold fruits and vegetables.

An important part of the studies described above is trying to make communities supportive of healthy choices. A community, defined as “a group of people who share values and institutions” (Pate, et al., 2000, p. S138), is a component of the socio-ecological model. Successful community-based health promotion programs change community norms to make healthy behaviors acceptable to community members. In addition, these programs are usually embedded in existing community structures, which promotes ownership by community members and may be a good use of limited resources (Pate, et al., 2000).

### *Health Belief Model*

When the socio-ecological model is providing a framework for obesity prevention efforts among children, individual (i.e., intrapersonal sphere of influence) level factors must be considered to impact health behavior change. The constructs of the Health Belief Model (HBM)—susceptibility, severity, benefits, barriers, cues to action, and self-efficacy—may be important to consider when planning programs to improve dietary patterns (Janz, Champion, & Strecher, 2002). Table 2.2 defines each construct and details the indicators used in this study.

**Table 2.2 HBM Constructs and Relationship to Intervention**

HBM Construct	Definitions and Indicators Specific to this Intervention
Perceived Susceptibility	<p><i>Parents' belief about the chances that their child is at risk of being overweight or gets a disease as a consequence of being overweight.</i></p> <ul style="list-style-type: none"> <li>• Parents perceive that their children are at risk for overweight/obesity if they eat unhealthy foods at concession stand.</li> <li>• Parents believe that their children could develop health problems associated with childhood overweight/obesity, including chronic diseases.</li> </ul>
Perceived Severity	<p><i>Parents' belief that the consequences of overweight/obesity could be serious for their child</i></p> <ul style="list-style-type: none"> <li>• Parents perceive childhood overweight/obesity as being a serious health risk, with grave short- and long-term consequences.</li> <li>• Parents would be concerned if their child were overweight.</li> <li>• Parents believe that overweight status would influence children's performance in athletic events.</li> <li>• Parents would change children's eating habits and/or physical activity if their children were overweight.</li> </ul>
Perceived Benefits	<p><i>Parents' belief that selecting healthy food and beverage choices will lead to positive consequences.</i></p> <ul style="list-style-type: none"> <li>• Parents believe that providing their children with healthy foods will result in better health now and in the future.</li> <li>• Parents believe that their children's healthy diets will result in better performance (i.e., in sports).</li> <li>• Parents believe that sports drinks are not necessary for children.</li> </ul>
Perceived Barriers	<p><i>Parents' belief that there are obstacles that are difficult to overcome to healthy eating for their children</i></p> <ul style="list-style-type: none"> <li>• Parents believe that their children do not like or will not eat healthy foods from the concession stand.</li> <li>• Parents believe that healthy foods are more expensive than unhealthy foods at the concession stand</li> <li>• Parents believe that healthy options are not readily available at the concession stand.</li> <li>• Parents believe that healthy foods from the concession stand are not as tasty as unhealthy foods.</li> </ul>
Cues to action	<p><i>Prompts used to encourage parents to select healthy concession choices</i></p> <ul style="list-style-type: none"> <li>• Signage at parks and recreation sites promoting certain healthy food/beverage choices</li> <li>• The foods/beverages that others (i.e., peers) are selecting at concession stands</li> <li>• Letters to parents</li> <li>• Media coverage of resolution</li> </ul>
Self-efficacy	<p><i>Parents' belief in their abilities to provide healthy food that the children will eat.</i></p> <ul style="list-style-type: none"> <li>• Parents believe they can convince their children to eat healthy foods from the concession stand.</li> <li>• Parents believe that they can select the healthiest choices from the concession stand.</li> </ul>

In the HBM, the main motivation to change is believed to be a combination of severity and susceptibility, which is referred to as perceived threat. However, an individual must have high levels of self-efficacy associated with the behavior to make a change. According to the HBM, when individuals are exposed to cues that increase their levels seriousness and/or susceptibility to a disease, the likelihood that they decide to take action increases. The selected action is based on benefits and barriers of the action and their self-efficacy to perform the behavior (Baranowski, et al., 2003).

Abood, Black, and Feral (2003) used the HBM as a theoretical framework for a nutrition intervention that encouraged healthy eating habits. Compared to baseline data, study participants had higher perceived susceptibility, severity, benefits, and self-efficacy, as well as lower barriers associated with consuming a healthy diet post-treatment. The participants also reported consuming significantly ( $p < .001$ ) less calories, fat, and cholesterol at post-treatment than at baseline (Abood, et al., 2003)

In the case of preventing obesity among children, some of these constructs may be most applicable to parents/caregivers because some children and adolescents may perceive themselves as “immortal” (i.e., low susceptibility) and do not understand the long-term consequences associated with obesity (i.e., low severity) (Igra & Irwin, 1995; IOM, 2002). To influence parents to provide healthier foods to their children, parents must believe that their child could become overweight or obese (i.e., susceptibility) and understand that serious consequences are associated with childhood obesity (i.e., severity). Parents and children must know about the positive benefits associated with eating a healthy diet and believe that the tangible and psychological costs are not too high (i.e., many benefits and few barriers). Reminders should be in place for these parents and children (i.e., cues to action), and parents must be confident in their own abilities to provide healthy foods for their children (i.e., self-efficacy).

### *Social Marketing Theory*

Although the HBM can be very useful to influence behavior change, the model is missing several components addressed by social marketing, which is the application of marketing principles and techniques to influence the voluntary behaviors of a target audience to improve their health. One

criticism of the HBM is that it lacks focus on behaviors themselves because the attention is on influencing beliefs, which in turn, should lead to behavior change. Social marketers, on the other hand, are concerned with behavior change and maintenance of that change. In addition, HBM does not consider social norms a key construct, but social marketers recognize the important influence that others (i.e., peers, family, and/or society) have on behaviors (Andreasen, 1995).

To influence the target audience, social marketers highlight the benefits of the behavior and reduce the barriers. Although social marketing developed from commercial marketing principles, there are distinct differences. Commercial and social marketing involve a voluntary exchange that provides both parties with benefits. However, in social marketing, the target audience, not a company or organization, will benefit from performing the behavior. Moreover, commercial marketers define success as financial gain, whereas social marketers define success as the benefits for the target audience or society as a whole (Andreasen, 1995).

Much like commercial marketing, social marketing involves the marketing mix, or the four Ps of marketing: product, price, place, and promotion. However, the definitions vary slightly in social marketing. In social marketing, for example, the product may be a tangible good, such as in this case, a healthy food, but it may also be intangible, such as the health of a child. The benefits associated with performing the voluntary behavior are also part of the product. Thus, the greater the benefits, the greater the likelihood that members of the target audience will adopt that behavior (Andreasen, 1995).

In social marketing, price involves reducing the barriers or costs associated with the behavior. The costs may be psychological, social, economic, and/or environmental. In the proposed program, the price may be the actual cost of healthy foods, but the price may also be giving up other (unhealthy) foods that children are accustomed to eating at the park. Social marketers must determine which costs are most prohibitive to their target audience and reduce them. They must also have a thorough understanding of the “competition” (Andreasen, 1995). In the current study, the “competition” would be the unhealthy

concession choices that are heavily promoted by large companies (e.g., Coca-Cola) and are very familiar to and liked by the target audience.

A social marketer must determine the right place(s) and time(s) to make their product available to the target audience. To determine the place, social marketers must have a thorough understanding of how their target audience members make decisions related to the behavior, in what environments they perform the behavior, and who influences the behavior (Andreasen, 1995). The places for this program were the park and recreation sites families frequent to play or watch children's sporting events.

The fourth, and most visible, "P" in the marketing mix is promotion. Promotion consists of using various media to distribute information about a product. These media may include pamphlets, flyers, newspaper articles, public service announcements, coupons, and media events. Promotion is intended to create and sustain a demand for the product (Andreasen, 1995). For the program in park and recreation facilities, many of the above mentioned media were used to increase parents' awareness of the healthy choices and persuade them to select these choices and influence their children to consume them.

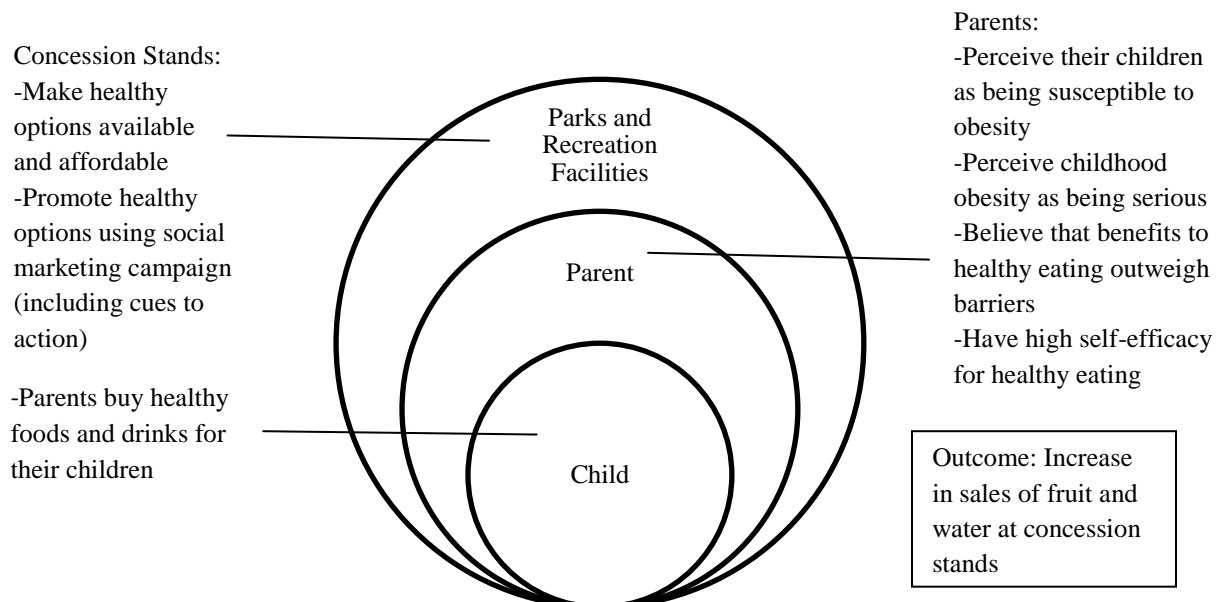
Although the four Ps are an integral part of social marketing, several other components are also important to researchers in this field. First, social marketers are research-driven. They believe that formative research is an essential part of the social marketing process and will learn as much as possible about their target audience and their thoughts, feelings, and attitudes when it comes to the behavior they are trying to change. Second, a major piece of the social marketing process is audience segmentation. Social marketers strive to understand their target audiences and provide them with campaigns tailored specifically for them. Finally, social marketers understand the complexities of most health programs, and they, therefore, conduct extensive process evaluation to account for and correct any problems with their campaigns along the way.

### *Theory and Intervention Integration*

According to Glanz, Rimer, and Lewis (2002, p. 27), models, such as the socio-ecological model, "draw on a number of theories to help understand a specific problem in a particular setting or context."

Models usually integrate several theories to explain and predict behavior change at multiple levels. Many food service-based studies use the socio-ecological model as a guide for designing interventions, since schools and universities are part of the institutional/organizational spheres of influence. All of these spheres of influence in the socio-ecological model affect the health behaviors of an individual.

In this study, the child is the ultimate focus for the intervention, but the parents and park and recreation facilities influence the child's eating behaviors (Figure 2.3). Parents often buy or mandate what a child can buy at the concession stand, while the facilities make healthy and/or unhealthy foods readily available and affordable.



**Figure 2.2 Spheres of Influence for Intervention**

Within the park and recreation facilities (i.e., place) sphere, this study examined the impact of a social marketing campaign on sales of fruit and water, the final outcome of the study. The facilities offered healthy products and promoted these products to the parents at their sites using the point-of-purchase signs, letters to parents, and media promotion. The promotions provided parents with a cue to action, and the intended action in this case was purchasing the healthy food or beverage. In this case, they were giving up items that were not as healthy they may have been accustomed to purchasing. For the intervention to be effective, parents must be aware of the intervention, that is, they must see the “cues to

action” that promote the intervention. Thus, one hypothesis is that parents who remember seeing one or more campaign component will be more likely to purchase healthy foods than those who do not recall cues to action. A related hypothesis is that fruit and water sales means during the intervention period (i.e., the four weeks that the social marketing campaign was implemented) will be higher than the sales means than during the pre-social marketing campaign period (i.e., the two weeks before the campaign began). Moreover, the parents must believe that purchasing the healthy options is important. To examine parental beliefs, this study used constructs of the Health Belief Model as they pertained to their children’s weight, eating habits, and long-term health. The study hypothesized that that parents with higher risk perception, a greater understanding of health risks associated with obesity and overweight, and more knowledge of healthy eating habits would have been more likely than parents with lower risk perception, less understanding of health risks associated with obesity and overweight, and less knowledge of healthy eating habits to have selected healthy concession stand options.

### Program Evaluation

Process evaluation data are used during program evaluations to better understand program implementation. Process evaluation is useful for explaining outcomes of the intervention and identifying changes to improve the program. Some components of process evaluation related to this study include: the recruitment and maintenance of participants/sites, the context of the intervention, resources available, extent to which program was (correctly) implemented, barriers, and exposure. Process evaluation is a cost-effective manner to document variability in implementation, especially when program are being implemented across different sites. With this documentation, evaluators are better able to make inferences about the effectiveness of project components.

Although outcome measures, such as sales data, provide researchers with insights into the usefulness of an intervention, many other program evaluation measures also help determine the worth or value of an intervention. Rossi, Freeman, and Lipsey (1999) describe in detail how program evaluations use scientific research methods to assess the design and implementation of a program. Evaluations use



quantitative and qualitative research methodologies to assess a specific program, not to advance knowledge or theory (i.e., research). In addition, the design of program evaluations is typically not rigorous enough to meet the standards of scientific research. A final difference is that the findings from program evaluations are typically not meant to be generalizeable, since the data are from a specific program.

Evaluation is also usually a collaborative effort, where the evaluator works with the program staff to facilitate decision-making around the program's delivery, implementation, and needed modifications. Evaluation is meant to collect data that will help develop and improve programs. The results of a program evaluation will often assist decision-makers as they consider whether or not to continue, expand, and/or modify programs. Unfortunately, program evaluations must face many barriers that research may not, such as constant input from collaborators/ stakeholders, very limited resources, and imperfect implementation.

This study was designed to evaluate a program. Since this was a pilot project, program evaluation was imperative to help determine the worth and future of the program. Throughout the intervention, site personnel were asked to submit program evaluation metrics, such as which aspects were going well and which needed to be improved. In addition, site personnel completed a final program evaluation survey. The final hypothesis is that the sites that most successfully implemented the program would have common traits.

To conclude, the studies described in this literature review mostly use the socio-ecological model to plan interventions focusing on small groups of people at worksites, restaurants, and/or schools. Glanz and Yarooh (2004, p. S76) state that “environmental, policy, and pricing interventions for fruits and vegetables are those efforts that aim to improve the health of all people through better nutrition, not just small groups of motivated or high-risk individuals.” More research is needed to explore programs aimed at large groups in community settings, especially studies informed by various theories at each sphere of influence. Unfortunately, large, multi-component interventions are often very complex and difficult to

sustain. However, community-based groups may be better suited to implement and maintain several environmental, policy, and pricing strategies to improve the health of their community members. Point-of purchase information, making more healthy choices available, and promoting healthy choices are all examples of well-researched strategies.

## CHAPTER 3

### METHODS

This chapter is composed of four sections. Section one states the goal of the study, research questions, and hypotheses, and describes the study design. Section two explains the setting and sample of this study. Section three describes the intervention, as well as the formative evaluation conducted with pilot site personnel to inform the intervention. The last section details the measures according to the types of evaluation: process and outcome.

#### Research Questions and Hypotheses

The goals of this study are to examine the development, implementation, and impact of a social marketing campaign focused on increasing healthy food sales in recreation and park facilities and to understand the factors that influence whether or not parents and children purchased healthy foods from the concession stands. The research questions and hypotheses are:

1) Does a social marketing campaign at concession stands increase the sales of healthy refreshment options (i.e., water and fruit)?

Hypothesis 1: Fruit and water sales means during the intervention period (i.e., the four weeks that the social marketing campaign was implemented) will be higher than the sales means than during the pre-social marketing campaign period (i.e., the two weeks before the campaign began).

2) Which constructs of the Health Belief Model are most strongly associated with parents' selection of healthy food choices?

Hypothesis 2: Parents with higher risk perception, a greater understanding of health risks associated with obesity and overweight, and more knowledge of healthy eating habits would have been more likely than parents with lower risk perception, less understanding of health risks associated with

obesity and overweight, and less knowledge of healthy eating habits to have selected healthy concession stand options.

3) What promotional strategies (i.e., cues to action) of the social marketing campaign raise parents' awareness about healthy choices?

Hypothesis 3: Parents who remember seeing one or more campaign component will be more likely to purchase healthy foods than those who do not recall cues to action.

4) What site-specific characteristics predicted successful campaign implementation?

Hypothesis 4: The sites that most successfully implemented the program will have common traits.

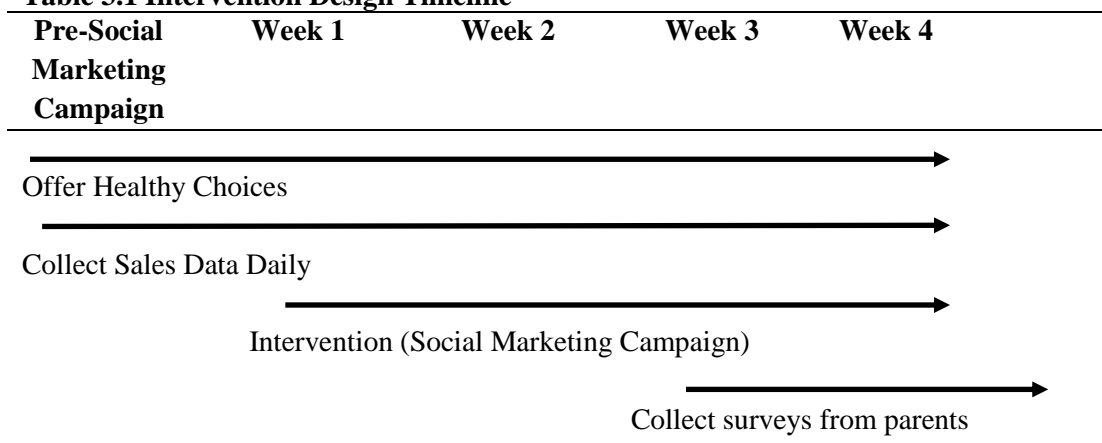
### *Research Design*

In April of 2006, the Georgia Recreation and Park Association's (GRPA) Board of Directors passed a "Healthy Food and Beverage Sales at Concession Stands and in Vending Machines in Local Park and Recreation Settings" resolution. At this time, all Georgia recreation and park facilities received letters about the resolution. The letter asked site management about their interest in testing strategies to accompany the resolution. Six sites from all different areas of Georgia volunteered to in this study.

The six self-selected pilot recreation and park sites received a social marketing campaign, called *Smart Choices*, to accompany the healthy concession items. While the GRPA Board encouraged all sites to provide healthy concession and vending options, this study tested how the operationalization of the policy was enhanced using an accompanying social marketing campaign for two of the healthy choices available in the concession stands: fruit and water. Although the resolution encouraged higher availability of a variety of lower fat foods, this study focused on promoting fruits because they are more appealing to children due to their sweet taste, and most fruits require little preparation, aside from rinsing (Perry, et al., 1998). This study also evaluated the impact of the campaign on buying bottled water because of the strong association between drinking high-sugar drink and childhood obesity (L. Harnack, et al., 1999). After a 2 week pre-social marketing campaign period, the six intervention sites used a social

marketing campaign to heavily promote these items, as well as the resolution in general, for 4 weeks (Table 3.1).

**Table 3.1 Intervention Design Timeline**



#### Setting and Samples

The GRPA is a community-based organization that supports and promotes the recreation and park industries in Georgia. The GRPA is the only state organization advocating for quality recreation and park areas, facilities, programs and services at the local level. The Association has a governing board of 34 individuals, more than 200 sites across the state, and about 1,600 members. Traditionally, the GRPA has promoted healthy life styles via its exercise facilities and sports teams. However, in April of 2006, they expanded into the realm of healthy eating when the Board adopted the “Healthy Food and Beverage Sales at Concession Stands and in Vending Machines in Local Park and Recreation Settings” resolution (Appendix A) and urged sites to adopt the resolution.

Members of Georgia's Nutrition and Physical Activity Initiative Community Workgroup drafted the resolution for the GRPA. Georgia’s Nutrition and Physical Activity Initiative is a CDC-funded joint effort between the Division of Public Health and several partners statewide, who are committed to obesity prevention through healthy eating and physical activity. The Initiative is divided into seven workgroups, and the Community Workgroup is responsible for assisting Park and Recreation sites as they implement some of the strategies outlined in the resolution. The assistance will include educating site leaders about the resolution, developing supporting materials for sites to use, and answering questions that may arise.

The pilot sites were in located in Georgia. Depending on the size of the county, some areas had more than one recreation and park site. In larger areas, some parks were operated by the city, while others were operated by the county. For the purpose of this intervention, each site consisted of one park facility. Although most of the pilot site facilities were in different counties, this intervention included two sites located in one county: Site A, which was city-operated, and Site B, which was county-operated. These sites were located in demographically diverse areas (U.S. Census Bureau, 2007). Sites A, C, D, E, and F were responsible for their own concession stands, while Site B had parent booster clubs and/or school organizations ran the concession stand (Table 3.2).

**Table 3.2 Site Descriptions**

<b>Pilot Site</b>	<b>Concession Stand Operation</b>	<b>Area Demographic Information</b>		
		<b>City Population</b>	<b>% White</b>	<b>Median Household Income</b>
Site A	Vendor	15,351	89.6	67,715
Site B	Parent Boosters	15,351	89.6	67,715
Site C	GRPA Staff	3,636	48.9	36,055
Site D	GRPA Staff	3,934	53.7	28,472
Site E	GRPA Staff	25,578	65.2	36,605
Site F	GRPA Staff	19,843	62.5	27,559

All sites offered a variety of sports and activities—such as baseball, soccer, football, dance, swimming, softball, track, tee ball, cheerleading, and basketball—to children between the ages of 5 and 17 years. Some of the sports leagues at each facility had up to 500 children. These children practiced and played games at the park and recreation facilities and often their families were spectators for these activities. The child athletes and their families often relied on the concession stand at the sites for snacks and/or meals. Traditionally, most of the available concession stands foods were loaded with fat and calories, such as hot dogs, hamburgers, pizza, nachos and cheese, French fries, and sodas. The resolution outlined healthier foods that should be offered as alternatives to these items (Appendix B).

The sites drew families from largely suburban, middle class populations. Some sites did have large groups of lower-income families that used the parks, but most were not enrolled in sports teams. Additionally, at several sites, there were large groups of Hispanic families. However, the survey was only

available in English. Parent recruitment for completing the survey began the last part of the third week of the intervention period, which was when teams began to plan their end of year parties. Any parent or caregiver who had a child participating in a sport at the six sites could complete a survey. Because the surveys were available in paper and pencil and online, parents with children participating in sports at other sites could also complete it online. Most parents who completed the paper and pencil surveys did so at their children's end of year team party. The team parent or coach then returned the completed surveys to the respective site's main office for collection. The results section details the parent sample.

#### Intervention: *Smart Choices*

To assist the sites with promoting water and fruits, members of Georgia's Nutrition and Physical Activity Initiative Community Workgroup drafted several resources, which I later further refined based on formative research. The final products became the promotional pieces of the *Smart Choices* social marketing campaign:

- Press release (Appendix C)-All intervention sites received a generic version they could personalize specifically to their sites. GRPA staffs in these communities had local media contacts to distribute the press release.
- Site staff distributed a letter to parents urging them to choose healthy foods at concession stands (Appendix D). The staff gave these flyers to coaches and asked them to distribute them to parents. Staff also included the letter in any mailings or sports packets that they distributed widely to parents. The sites that had the capability also posted the letter to their respective websites.
- GRPA staff gave letters to their concession stand operators asking them to offer healthy food alternatives (Appendix E). In most sites, the GRPA staffed the concession stand and, therefore, the letter was most applicable to the site personnel. However, in Site B, the site staff had to ensure that the letter reached the parent group that ran the concession stand.

- Intervention sites each received electronic copies of the Smart Choices logo (Appendix F) and five color copies of each point-of-purchase sign (Appendix G) to post at their concession stands as cues to action.

GRPA intervention facilities had the option to distribute letters to community partners requesting support (Appendix H) for their program. This was an optional piece of the program that the pilot sites requested.

### *Formative Evaluation*

Before beginning the social marketing campaign, a better understanding of the target audience was necessary. To tailor campaign messages to parents and young children who made purchases from concession stands, I collected the following information during unstructured interviews with the manager and in some cases, other key personnel from each pilot site: 1) Who made the purchases at the concession stand (i.e., child or parent)? 2) What messages related to selecting water and fruit at the concession stands were most persuasive to parents? 3) What did the parents buy for themselves at the concession stands (i.e., were they role-modeling healthy eating habits)? 4) Did parents have any rules about what children were allowed to buy at the concession stand? 5) Why did parents allow kids to buy certain foods (i.e., because the child liked them, because the food was healthy, because the parents wanted to avoid temper tantrums, because the price was low, etc.)? In addition, I collected formative data from each of the pilot sites to assess barriers to the implementation of the various intervention and evaluation procedures and offer solutions.

When asked about their customers' concession stand buying behaviors, most site managers indicated that parents and children frequent their concession stands, but most of the foods purchases were unhealthy, such as chips, candy, and soda. They believed that parents and children would be most persuaded by messages that emphasized how healthy eating could impact performance in sports. They did not think that messages about children's health would be influential, because they believed that parents already knew that certain foods were better than others. However, if the message made a direct



connection between eating a certain food or consuming a drink and being a better athlete, parents and children would take notice.

Site personnel believed that questions about concession stand eating behaviors on the parent surveys would offer some valuable insights. Although I originally proposed distributing the parent surveys at the concession stands, site staff informed me that parents were usually trying to watch their children play or practice and would not be willing to fill out the questionnaires during that time. Therefore, they suggested using two data collection methods: 1) their websites for online surveys, and 2) a paper-and-pencil version distributed at end of the year parties, because the atmosphere was more relaxed at that time. They emphasized the importance of an easy data collection procedure for team moms and/or coaches to return the completed paper and pencil versions of the surveys.

Once all materials were developed, and before beginning the intervention, I met with staff at all sites to review the social marketing campaign and program evaluation components. The staff at each site reviewed materials and provided feedback. I made several changes based on this input. For example, I developed a logo for the healthy options and all materials linked to promoting the materials were branded with the logo. In addition, I changed the promotional flyers based on individual site's preferences (e.g., one site wanted the football player to be in a different colored jersey because the one pictured was in a rival team's color). I also discussed the parent survey dissemination plan, and the site staff agreed that end of the year parties and online were good strategies for reaching parents. Finally, they indicated that using online services, such as web-based surveys and e-mails, were the best ways to access data from them (i.e., the site staff).

During this time, the site personnel also anticipated potential barriers to selling healthier foods. Most individuals expressed concern about their profits. They were worried that parents and children would not purchase fresh fruit at the concession stand because they: 1) were not used to having it available, 2) liked unhealthy snacks, and 3) preferred the food they always purchased. As a consequence, concession stand personnel feared losing money if the fruit spoiled.

The week before the intervention began, I visited the intervention sites again to ensure that they had all of the materials they needed for the intervention and discussed how to use the campaign components with the GRPA staff. In addition, I provided ideas to alleviate their primary concern: lost profits. I also visited each of the pilot sites periodically during the intervention phase to collect process evaluation data. Table 3.3 details the timeline of activities.

**Table 3.3 Project Timeline**

<b>Dates</b>	<b>Tasks</b>
May-July, 2007	Formative evaluation <ul style="list-style-type: none"> <li>• Interviews with each site managers (and other key personnel)</li> <li>• Ongoing e-mail and phone communication to seek feedback on campaign materials</li> </ul>
August, 2007	Distributed program materials to all sites
September 1, 2007	Program kicked off <ul style="list-style-type: none"> <li>• Sites offered fruit and water</li> </ul>
September 1-14	Pre-social marketing campaign period Visited all sites for on-site observations <ul style="list-style-type: none"> <li>• September 1-7: Site A, Site B, and Site C</li> <li>• September 8-14: Site D, Site F, and Site E</li> </ul>
September 15 – October 14	Pilot sites implemented social marketing campaign Visited all sites for on-site observations <ul style="list-style-type: none"> <li>• September 15-22: Site A, Site B, and Site C</li> <li>• September 22-29: Site D, Site F, and Site E</li> <li>• September 30-October 5: Site A, Site B, and Site C</li> <li>• October 6-14: Site D, Site F, and Site E</li> </ul>
November 15	Asked all sites to submit completed records and parental surveys
November-December	Administered concession stand operator/site personnel surveys online

#### Measures

This study assessed process and outcome measures related to the Smart Choices campaign. Process evaluation data were collected from observations, on-site interviews, and surveys of site personnel. Outcome evaluation data were collected from weekly sales data and a parent survey that assessed demographic information, program awareness, purchase of promoted concession choices, and HBM constructs.

### *Process Evaluation Measures*

During the pre-social marketing campaign period (the week before the social marketing campaign), I observed all sites to ensure that fruit and water were available and noted which fruits were in stock regularly. To more closely monitor the extent to which the sites made healthy choices available, even when I was not present, concession stand operators sent electronic weekly reports of food and beverage offerings (Appendix I).

During the implementation phase of the policy and the social marketing campaign, I collected data to answer the following questions: 1) Was the policy (social marketing campaign and fruit and water available) implemented? 2) What components were implemented? 3) What was the context (e.g., correct and timely use of campaign materials, availability of healthy choices, etc.) of the implementation? 4) How did the implementation vary from site to site? 5) What comments did concession stand operators get from customers about the campaign?

To answer the first four questions, I completed a checklist at each site (Table 3.4). Additional sources of process data were: 1) taking pictures at each site, 2) tracking the availability of fruits and water, 3) sending weekly e-mails to site personnel to determine whether and when they used campaign materials, such as press releases and letters to parents, and 4) collecting newspaper clippings about the intervention. I used these data to document differences from site-to-site, such as unique pricing, packaging, and/or marketing strategies.

**Table 3.4 Process Evaluation Checklist for On-Site Observations**

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- List fruits available at the concession stand (Note if fresh, canned, and/or dried).
  - How are fruits displayed?
  - What are the prices of the fruit products?
  - Is water available at concession stand?
  - How is the water displayed?
  - What is the price of water?
  - Are concession stand operators distributing stickers with the purchase of water?
  - Are concession stand operators distributing stickers with the purchase of fruit?
  - Is there are point-of-purchase sign at the concession stand encouraging the *Smart Choices*?
  - Are additional promotional items being used by this site?
  - Is this site using any creative marketing strategies?
- 

To answer the fifth question (customers' comments about the campaign), site personnel provided weekly feedback about the intervention. The personnel documented the program materials they were using, the barriers they were encountering, and the suggestions they had for program improvement. At the end of the four weeks, they completed an open-ended survey (Appendix J). This survey included questions related to process evaluation, especially barriers to program implementation. The response categories for the first part of the survey, which asked if they used various promotional pieces (i.e., signs, letters, and press release) for the *Smart Choices* campaign, were *yes*, *no*. The last six questions were open-ended, and asked site personnel about the most helpful resources, recommendations, barriers, parents' reactions, and additional steps they were willing to take to make their concession choices healthier.

#### *Outcome Measures*

##### Concession Stand Sales

Concession sales data were collected for every week that the site hosted a game. Site personnel tracked sales of fruit, water, and other beverages (i.e., sports drinks and sodas) and submitted these data via e-mail each week.

##### Parent Survey

The parent survey (Appendix K) assessed the following demographic characteristics: race/ethnicity, relationship to child, number of children, educational attainment, household income, and marital status. One item measured general concession stand use. In addition, the survey comprised the following concepts: awareness of promotional strategies (i.e., cues to action), food purchase and perception of healthiness, and HBM constructs.

*Awareness* of the promotional strategies consisted of nine items asking about specific components of the intervention. These promotional strategies were intended to provide parents with cues to select healthy choices. Parents indicated whether they had seen in the prior 6 weeks the following interventions components: newspaper article, sign encouraging water purchase, sign encouraging fruit purchase, balloons, letter about healthy choices, aprons, stickers, t-shirts, and other items the site may have used. The response categories for these items were *yes* (1) and *no* (0). In addition, parents were asked one dichotomous item indicating whether or not they were aware that the site they frequented was participating in a program to promote healthy concession items.

To measure parent *buying habits* and the *perceived health of certain foods*, the survey listed six foods (fresh, dried, and canned fruit; hamburger; pizza; hot dog; candy; chips) and three beverages (water, soda, sports drinks) frequently available at concession stands. Parents indicated whether they had bought these items and their perception of how healthy or unhealthy those foods were. A 4-point scale (*healthy*, *somewhat healthy*, *somewhat unhealthy*, *unhealthy*) measured parental perception of how healthy the items were. The responses were dichotomized, and the correct responses were added together. For example, each respondent who correctly identified a healthy item as *healthy* or *somewhat healthy* received 1 point. Then, all of the healthy items were added together so that a respondent could have a score between 0 and 4 for the healthy food (i.e., fresh, dried, and canned fruit and water) knowledge score. The same procedure applied to the unhealthy food knowledge scores. For each unhealthy item correctly identified as *somewhat unhealthy* or *unhealthy*, respondents received 1 point. The unhealthy scores ranged from 0 to 7 (i.e., soda, sports drinks, hamburger, pizza, hot dog, candy, chips).

A short food frequency questionnaire (FFQ) was used to estimate children's *consumption of various foods and drinks*. The items list on this parent survey were specifically designed to reflect children's eating habits, and particular items were incorporated that were of most interest in this study, i.e., fruit, water, and junk foods. Thus, the questionnaire contained seven items: sweets, snack foods, fruit, vegetables, sodas, sports drinks, and fast food. Parents indicated the frequency their children consumed these items on a 6-point scale: *never/rarely* (0), *1-3 times per month* (1), *1-2 times per week* (2), *3-6 times per week* (3), *once a day* (4), and *more than once a day* (5).

The parent survey also assessed four HBM constructs (Table 3.5). Some of the items were based on other studies that used the HBM as a theoretical model for health interventions, (Abood, et al., 2003; Janz, et al., 2002) but I also developed others specific to this study.

**Table 3.5 Parental Survey Items Measuring HBM Constructs**

Construct	Items	Response Categories
Susceptibility	Which best describes your child's current weight?	Underweight, Just Right, A Little Overweight, Somewhat Overweight, Very Overweight
	Do you think your child's weight is a problem now?	Yes/No
	On most days, your child eats....	Too little, just right, too much
	Do you think your child's weight may be a problem in the future?	Yes/No
Barriers and Benefits	When making decisions about what to purchase at the concession stand, how important are the following factors: <ul style="list-style-type: none"> <li>• Tasty Food</li> <li>• Low Cost</li> <li>• Healthy Food</li> <li>• Familiarity</li> <li>• Habit (Tradition to buy something)</li> <li>• Convenience (packaging, easy to eat)</li> <li>• Child's preference</li> </ul>	Rank from 1 to 7 (with 1 being most important and 7 being least important)
Self-efficacy	How confident are you in your ability to improve your child's eating habits?	Very confident, confident, somewhat confident, not at all confident
	How confident are you in your ability to make your child eat fruits?	
	How confident are you in your ability to make your child drink water, instead of sodas or sports drinks?	

*Susceptibility to overweight* was measured using four items. The first asked which best describes the child's current weight, and the response categories were *underweight*, *just right*, *a little overweight*, *somewhat overweight*, and *very overweight*. Responses were dichotomized: Any perception of being overweight was coded as 1, and *underweight* and *just right* was coded as 0. The second item asked parents if they thought their child's current weight was a problem, and the responses were *yes* (1) and *no* (0). The third question asked how much the child eats on a typical day. Responses were *too little* (0), *just*

*right* (0), and *too much* (1). For the final item, parents considered their children's susceptibility to overweight/obesity in the future by indicating if they thought their child's weight might be a problem in the future, and the responses were *yes* (1) and *no* (0). Scores were added to compute the susceptibility scale. Scale scores ranged between 0 and 4, with higher values indicating higher susceptibility to overweight. In this sample, the internal consistency of the scale scores, measured by Chronbach's alpha, was 0.75.

To assess *perceived barriers and benefits* to selecting healthy choices, parents ranked the importance of seven factors when making purchases at the concession stand (from 1= *most* to 7 = *least*). The following factors were listed: tasty, healthy food, low cost, familiarity, habit (tradition to buy something), convenience (packaging, easy to eat), and child's preference. Each of these factors may be seen as a barrier or benefit to eating healthy by respondents based on the food chosen. For example, familiarity of eating apples is a benefit, while familiarity with eating chips is a barrier. Mean rankings were calculated for each factor, as well as the percent of respondents rating each factor as most important.

Parental *self-efficacy* for changing children's food consumption behaviors was measured with three items specific to this intervention. Parents reported their levels of confidence in their abilities to change their children's eating habits, make their children eat fruit, and make their children drink water on a 4-point scale (4 = *very*, 0 = *not at all*). In this sample, the internal consistency of the scale scores, measured by Chronbach's alpha, was 0.74. The responses were added for a self efficacy scale, and values ranged from 0 to 12. In addition, parents' self-efficacy was compared to the age of their children.



## CHAPTER 4

### RESULTS

This chapter, which presents the results of the study, is composed of six sections. Section one provides an overview of program implementation. This section contains a site by site analysis of the intervention, including pictures and overall observations, and the results of the concession stand operators' survey. Section two describes the demographic characteristics and concession buying habits of the parents who participated in the survey. Sections three through five answer each outcome-related research question, and section six summarizes the characteristics of the most successful sites, to answer the final research question.

#### Program Implementation

To answer the research questions related to process evaluation, I visited each site at least twice during the intervention to describe the level of program implementation and observe variations from site to site. The site analyses also include sales data and information that the concession stand operators provided throughout and at the end of the intervention period.

#### *Site Observations*

*Site A.* The concession stand at the Site A site was operated by a third party, a private business. This business owner has a contract with the Parks and Recreation Department, and he provides a percentage of his profits to the site. He was incredibly enthusiastic about the program and viewed it as an opportunity to expand his selections, get free advertising, and try innovative marketing techniques. As such, he began using program materials before the end of the pre-social marketing campaign period.

The Parks and Recreation site staff was also very interested in the program. They posted links to information about *Smart Choices* on their website, which they said was used by the majority of their

parents. In addition, the local press ran a story on the campaign after staff sent a press release to a personal contact, and the story was featured on a local online news source (Appendix L).

In addition to hanging the *Smart Choices* point of purchase flyers, the concession stand operator used *Smart Choices* labels on fruit cups, and displayed his whole fruit in a hanging basket (Figure 4.1). He sold whole fruit for \$0.50 and the fruit cups for \$1.50.



**Figure 4.1 Pictures from Site A: Signs (left), Fruit Cup (center), and Fruit Basket (right)**

*Site B.* The Director of the Parks and Recreation Department at the Site B appeared to be interested in program initially. However, the concession stand was run by parents (i.e., a booster club), and several teenagers were involved in helping sell food and drinks. They did not have an adequate system for tracking sales. Several calls, e-mails, and visits to elicit missing sales data went unanswered. As a result, the data from this site were very limited and, therefore, this site was eliminated from the analyses of sales of water and fruit.

The signage at the concession stand was not very visible. They had several competing signs for unhealthy foods and opted to only use the *Smart Choices* stickers on their menu board, instead of the promotional flyers. They did, however, display their fruit selection well in a basket on the counter (Figure 4.2).



**Figure 4.2 Pictures from Site B: Concession Stand (left), Menu Board (center), and Fruit Display (right)**

*Site C.* In Site C, the Parks and Recreation Department operated the concession stand. Unfortunately, the staff member assigned to the intervention in Site C was a new employee, and he was not interested or enthusiastic about program. He did not buy fresh fruit for concession stand because he received the information about the program too late to place the orders. In addition, he did not think fresh fruit would sell well. Therefore, he did not want to spend part of his budget on highly perishable food that, in his opinion, would have gone to waste. Therefore, he purchased small packs of dried fruit, such as raisins, in limited quantities to test sales.

As far as program promotion, the signage was used, but was not highly visible. Instead of being placed in the windows where orders would be placed, signs were displayed on the side and back windows of the stand (Figures 4.3). In addition, the letters to the parents and coaches were not distributed until week 2 of the intervention period.



**Figure 4.3 Pictures from Site C: Sign at side (left) and back window (right)**

*Site D.* Staff was also very enthusiastic about the program. They had one person assigned to coordinating all *Smart Choices* related activities.

The Parks and Recreation Department operated the three concession stands at this site. They used small program signage (i.e., flyers) at all concession stands (Figure 4. 4). However, they began using the signs slightly early, by the end of the pre-social marketing campaign period. Although they displayed their fresh fruits at the concession stands, they were also next to junk foods.



**Figure 4.4 Pictures from Site D: Signs at Concession (left) and Fruit Display (right)**

*Site E.* Staff at this site was very excited about program and supplemented the existing social marketing campaign materials with other creative marketing pieces. The site has a public relations and

marketing specialist who had many ideas about program promotion, such as including articles in their quarterly newsletter and large banners.

The site had only one large concession stand, operated by the Parks and Recreation Department. Unfortunately, this site only had home games 2 weekends of the 4 week intervention period. During this time, they displayed many program signs, including two large banners they paid to print themselves (Figure 4.5). In addition, they had fresh fruit on display, but it was situated next to low nutrient dense foods, such as candy and chips. They also had a *Smart Choices* sign next to their price list to remind customers to make healthy selections.



**Figure 4.5 Pictures from Site E: Banners (top), Fruit Display and Price List (bottom)**

*Site F.* Although the concession stand in Site F was operated by the Parks and Recreation Department, the Concession Stand operator was not my direct contact, which made it very difficult to get the sales data. In addition, the site did not have home games during week 2 of the intervention, and did not offer fruit on two of the other weeks that they did have home games because they forgot to order it. Therefore, fruit was only available at the pre-social marketing campaign period and during week 1.

Site F used the *Smart Choices* signage well at their concession stand (Figure 4.6). However, they found it difficult to promote the program in other ways because the sporting events at their site were mostly tournaments, with traveling players. They did not have home teams that visited the sites regularly



during fall season. Therefore, they could not distribute the parent/coach letters to increase awareness of the program.



**Figure 4.6 Pictures from Site F: Price List (left) and Sign (right)**

#### *Summary of Implementation*

Table 4.1 summarizes the implementation strategies from each site, including information about the point of contact, *Smart Choices* campaign materials, and availability of healthy selections.

**Table 4.1 Site-by-Site Implementation Overview**

<b>Site</b>	<b>Point of Contact</b>	<b>Campaign Materials</b>	<b>Availability of Fruit and Water</b>
A	<ul style="list-style-type: none"> <li>•Site manager and concession stand operator were both very enthusiastic about program</li> <li>•Concession manager had sales tracking mechanism in place</li> </ul>	<ul style="list-style-type: none"> <li>•All campaign materials were used</li> <li>•Story about Smart Choices ran in local newspaper</li> </ul>	<ul style="list-style-type: none"> <li>•Fruit and water were available throughout intervention period.</li> <li>•Fruit well displayed and creative marketing used (i.e., pre-cut fruit)</li> </ul>
B (sales data not included in analyses)	<ul style="list-style-type: none"> <li>•Site manager initially interested in program, but lost enthusiasm during season</li> <li>•Parents and teens running stand not well trained on program and did not track sales</li> </ul>	<ul style="list-style-type: none"> <li>•Did not use signs</li> <li>•Had stickers on handwritten menu board</li> </ul>	<ul style="list-style-type: none"> <li>•Fruit displayed in a basket, but limited selection (apples and bananas)</li> </ul>
C	<ul style="list-style-type: none"> <li>•Site manager assigned program to new employee with no interest in program</li> </ul>	<ul style="list-style-type: none"> <li>•Used on sign in back window of concession stand, which was not visible at point-of-purchase</li> </ul>	<ul style="list-style-type: none"> <li>•Did not have funds to purchase fresh fruit, and therefore, only had packets of dried fruit (i.e., raisins)</li> </ul>
D	<ul style="list-style-type: none"> <li>•One contact who coordinate all activities and was enthusiastic about program</li> </ul>	<ul style="list-style-type: none"> <li>•Used signs, but began using them before the end of the pre-social marketing campaign period</li> </ul>	<ul style="list-style-type: none"> <li>•Fruit available and well-displayed</li> </ul>
E	<ul style="list-style-type: none"> <li>•Site manager was main point of contact, but the marketing manger was also involved</li> <li>•Very enthusiastic about program</li> <li>•Trained concession staff well</li> </ul>	<ul style="list-style-type: none"> <li>•Used all promotional materials plus large banners they had printed with campaign logo</li> </ul>	<ul style="list-style-type: none"> <li>•Fruit available and well-displayed</li> </ul>
F	<ul style="list-style-type: none"> <li>•Site manager was contact, but did not have contact with concession stand operator</li> </ul>	<ul style="list-style-type: none"> <li>•Used signs</li> </ul>	<ul style="list-style-type: none"> <li>•Fruit purchased and displayed fruit during week 1 only</li> </ul>



### *Concession Stand Operators' Survey*

Throughout and following the intervention period, all sites were asked to provide feedback about the *Smart Choices* campaign. A contact from each site completed an online survey to provide additional process data to complement the data collected during on-site observations.

All sites reported having used the parent/coach letter and the promotional signs. When asked which resource was the most helpful for promoting *Smart Choices*, all sites cited the point of purchase flyers. Half of the sites reported having used the concession stand operator letter, balloons, and press release. Of those that distributed the press release, only 1 (Site A) reported that a story had been in a local paper about the campaign. None of the sites used the letter to solicit support from community partners for the campaign.

Site personnel reported that bananas, apples, and oranges were the most offered fruits at the concession stands. One site reported selling applesauce and pre-packaged fruit cups, another offered only dried fruit, and a third also sold cut fresh fruit.

When asked about barriers or problems they faced when implementing the program, half of the respondents described fear of spoilage. Site personnel were afraid of buying too much fruit because they thought it may spoil before being sold. Two sites used pre-packaged fruit cups for a longer shelf life and/or dried fruit. Two respondents wrote about problems related to customers' lack of familiarity with fresh fruit and other healthy items at concession stands. One respondent indicated that "people are still so used to eating the Little Debbie cakes and Cokes after the game. It will take time to change mind sets. It will happen, though." Another respondent wrote that "most of the children and parents...know what we have so they don't expect or look for something new."

When site contacts were questioned about improvements that could make the program more successful, the majority wrote about the importance of consistency and continuing promotion efforts. They felt that more time was needed to educate parents and children about the healthier choices and get them used to selecting the choices at the concession stands. In addition, half of the respondents indicated

that they would like to offer even more healthy items and that efforts needed to be made to have concession stand food suppliers sell healthy foods at competitive prices.

Site personnel were asked how customers responded to the availability of fruit, and 4 respondents indicated that parents and children both reacted positively to the healthy selections. However, one Park and Recreation employee (from Site C) wrote that nobody even noticed the new foods that were available and just continued to buy the foods they always ate from the concession stand.

None of the sites reported replacing any of their more traditional, unhealthy items with healthier choices. They all had added fruit to their selections. However, one concession stand manager mentioned replacing some menu items as a future step. This individual noted that they should make available foods that the customers typically buy, such as chips, but sell only baked options. Sugar-free items were also mentioned as a possibility.

#### Participating Parents

Pilot sites reported difficulty obtaining completed surveys from parents. In some sites, the team mom or coach was too busy during the end of year festivities and simply forgot. A total of 65 respondents completed the paper and pencil survey and 247 completed the survey online. However, many of the online surveys were incomplete. Those that were less than 50% percent complete were eliminated from the data set, which left 85 online respondents. Thus, the final parent sample was 150. As shown in Table 4.2, respondents were largely married (65.3%), White (64%), mothers (61.3%), with a household income of more than \$60K/year (48.7%). The respondents' children's median age was 9.6 years.

**Table 4.2 Parent Survey Demographic Information**

<i>Demographic Characteristics</i>	<i>Number n=150</i>	<i>Percent</i>
Race/Ethnicity		
White	96	64.0
African American	18	12.0
Hispanic	5	3.3
Asian	1	0.7
No Answer	30	20.0
Relationship to Child		
Mother	92	61.3
Father	25	16.7
Other (grandparent, guardian, etc.)	7	4.7
No Answer	26	
Number of Children		
1	25	16.7
2-3	80	53.3
4 or more	13	8.7
No Answer	32	
Level of Education		
Some High School	5	3.3
Graduated High School	21	14.0
Some College	31	20.7
Graduated College	39	26.0
Grad School	26	17.3
No Answer	28	
Household Income		
\$0 – 15,000	7	4.7
\$15,000 – 30,000	8	5.3
\$30,001 – 45,000	11	7.3
\$45,001 – 60,000	20	13.3
\$60,001+	73	48.7
No Answer	29	19.3
Marital Status		
Married	98	65.3
Divorced	14	9.3
Single	10	6.7
No Answer	28	18.7

Site D submitted the most paper and pencil surveys (n=55) and Site A had the most online surveys (n=26). Some online respondents (n=26) did not originate from pilot sites (Table 4.3). These

responses were only included in the analysis that examined the relation between HBM constructs and purchasing behaviors. The online survey included a skip pattern so that respondent who indicated that they did not participate in one of the six intervention sites did not complete the questions pertaining to *Smart Choices* awareness.

**Table 4.3 Respondents' Parks and Mode of Survey Completion**

Site	Paper-Pencil	Online	Total Responses (Percent of Total)
A	5	26	31 (21%)
B	0	14	14 (9%)
C	0	0	0 (0%)
D	55	8	63 (42%)
E	0	6	6 (4%)
F	5	5	10 (7%)
Other	0	26	26 (17%)

One question pertained to respondents' general concession purchasing behaviors. Parents could select all of the responses that identified their buying behaviors. Most respondents (61%) indicated that they purchased food for themselves at the concession stand, and a little more than half (52%) bought items for their child. Only 30% of respondents sent their child to buy items. Respondents more frequently bought snacks (52%) than meals (12%) at the concession stand.

#### Research Question 1: Healthy Concession Sales

To examine whether the sales of healthy refreshment options (i.e., water and fruit) increased as a result of a social marketing campaign, sales data were tracked during the pre-social marketing campaign period and throughout the four-week intervention period. However, the game schedule varied from site to site, and therefore, data are missing for some weeks. Sites A and F's home seasons ended week 3 of the intervention period, and they had no data for week 4. Site E only had home games at the pre-social marketing campaign period and weeks 3 and 4. Due to insufficient data, site B was not included in the analyses.

### *Fruit Sales*

In the past, fruit had not been available at the concession stands, but the concession stand operators added different types of fruit to their menu for the intervention. Average fruit sales increased from 21.0 units (i.e., pieces of fruit) at the pre-social marketing campaign period to 23.3 during week 4 (Table 4.4). Average fruit sales were highest during week 3. Fruit sales at Site A were highest during the pre-social marketing campaign period, but began increasing again from week 2 to week 3. Site C only sold packages of dried fruit. The sales peaked during week 3 of the intervention, but only 6 units were sold during this week. Site D experienced fluctuations in their fruit sales over the course of the intervention period, with sales peaking at 55 units/pieces around week 3. Fruit sales at Site E increased during the intervention period, rising from 7 units at the pre-social marketing campaign period to 40 units at week 4. Site E's fruit sales may have been higher during week 3, but they sold out of fruit that week. Therefore, they purchased larger quantities for the following week. The concession stand operator indicated that they did not buy large quantities of fruit at first because they were afraid customers would not eat it, and the leftovers would spoil. However, they bought more each week and sold more. Fruit sales at Site F were highest during week 2 of the intervention. During that week, they also had a large baseball tournament.

**Table 4.4 Fruit Sales at Pre-Social Marketing Campaign, Intervention, and Follow-up by Site**  
Units Sold\*

	Pre-Social Marketing Campaign	Week 1	Week 2	Week 3	Week 4
Site A	24	18	17	19	
Site C	16	4	2	6	4
Site D	42	53	39	55	26
Site E	7			25	40
Site F	16	10			
Average	21.0	21.3	19.3	26.3	23.3

\* Depending on the site, a unit of fruit is considered one whole piece of fruit, one package of dried fruit, or one prepackaged container of cut fruit.

### *Water Sales*

Average water sales were highest during the pre-social marketing campaign period (197 units), and steadily decreased thereafter, with an average of 53 units sold during the final week of the intervention. Water sales at Site D experienced large fluctuations (Table 4.5).

**Table 4.5 Water Sales at Pre-Social Marketing Campaign Period and 4 Week Intervention by Site**

	Units Sold				
	Pre-Social Marketing Campaign	Week 1	Week 2	Week 3	Week 4
Site A	165	105	99	86	
Site C	48	32	26	29	31
Site D	192	240	216	192	48
Site E	100			88	80
Site F	480	96	48	24	
Average	197.0	118.3	97.3	83.8	53.0

Because drink sales are greatly dependent on the weather, all beverage sales were recorded to compare water sales to drink sales in general (Table 4.6). The percent of water sales over all drink sales increased from the pre-social marketing campaign period (31%) to week 1 (34%), that is, a 9% increase. All sites increased their water sales during week 1: Site A by 12%, Site B by 4%, Site C by 42%, and Site F by 14%. However, beyond that first week, water as a percent of beverage sales decreased overall. From the pre-social marketing campaign period to week 4, water sales as a percent of all drink sales rose by 20% in site C and by 5% in Site E ; however, in Site D sales decreased by 57%.

**Table 4.6 Water Sales as Percent of Total Beverage Sales at Pre-Social Marketing Campaign Period and 4 Week Intervention by Site**

	Percent of Units of Water Sold / All Beverages Sold				
	Pre-Social Marketing Campaign	Week 1	Week 2	Week 3	Week 4
Site A	38%	43%	41%	33%	
Site C	25%	26%	23%	25%	30%
Site D	14%	24%	16%	15%	6%
Site E	40%			34%	42%
Site F	38%	44%	40%	25%	
Average	31%	34%	30%	26%	26%

## Research Question 2: HBM Constructs and Selection of Healthy Concession Items

The second research question asked which HBM constructs, measured with the parental survey, were most strongly associated with the selection of healthy items at the concession stand.

### *Parental Selection of Food and Perceived Healthiness*

The items that were reportedly purchased most often were sports drinks, with 60% of parents indicating they purchased them at the concession stand in the past season. The response categories for the perceived health of the each item were dichotomized so that respondents who indicated the items were *somewhat healthy* or *very healthy*, were categorized as perceiving the items to be healthy, and the respondents who indicated the food/drink was *somewhat* or *very unhealthy* were placed in the perceived unhealthy category. Many respondents (69%) indicated that they believed sports drinks to be healthy. Water and fruit were also rated among the healthiest items (Table 4.7).

**Table 4.7 Concession Items Purchased and Perceived Health**

Concession	% Purchased	% Perceived Healthy	% who Purchased who Perceived Healthy
Water	59%	99%	100%
Fresh Fruit	12%	96%	100%
Dried Fruit	4%	97%	80%
Canned Fruit	3%	82%	60%
Sports Drinks	60%	69%	68%
Burger	33%	21%	26%
Pizza	15%	22%	14%
Hot Dog	48%	25%	25%
Candy	43%	4%	3%
Chips	41%	4%	5%
Soda	54%	7%	7%

Children's overall eating habits were assessed using a modified Food Frequency Questionnaire (FFQ). Many respondents indicated that their children most of foods on the list (e.g., sweets, snack foods, fruit, and vegetables) on a daily basis. Fruits and vegetables were the foods most frequently consumed

more than once a day. Fast food, on the other hand, was reportedly only consumed most often on a weekly or monthly basis (Table 4.8).

**Table 4.8 Children's Frequency of Food Consumption**

	Daily	Weekly	Infrequently
Fruit	55%	40%	5%
Vegetables	51%	42%	6%
Soda	28%	47%	25%
Sports drinks	29%	52%	20%
Fast Food	6%	50%	44%
Sweets	44%	48%	8%
Snack Foods	37%	54%	8%

#### *Susceptibility to Being Overweight*

Most respondents did not feel their children's susceptibility to overweight and obesity was very high. In fact, 79% (n=119) indicated that their children's current weight was *just right* and 12% indicated that their children's weight was a *little over*. As for eating habits, the 79% (n=118) of respondents believed their child ate an amount that was *just right*. Only 13% felt that their child ate *too much*. Only 9% of respondents indicated that their child's weight was currently a problem, but 22% anticipated that it may be a problem in the future.

#### *Benefits and Barriers*

When making decisions about concession stand purchases, the factors that parents rated most highly/important were taste, cost, and child's preference, respectively. Parents rated habit and convenience as being less important (Table 4.9). Only 7% ranked healthy as their top reason for selecting food.



**Table 4.9 Factors Influencing Concession Stand Purchases**

Factor	Mean Ranking	% that Ranked Factor #1
Tasty	2.50	36%
Low Cost	3.33	17%
Child's preference	3.56	19%
Healthy	3.73	7%
Familiar	4.34	7%
Convenient	4.63	11%
Habit	4.72	4%

### *Self-efficacy*

Most respondents reported a high level of self-efficacy when it came to changing their children's eating habits. Seventy one percent of respondents felt *very confident* or *confident* in their abilities to make their children eat fruits. Similarly, 68% and 70% of respondents were confident in their abilities to change their child's eating habits overall and make their child drink water, instead of sports drinks, respectively. Parents' self-efficacy decreased as their children aged. The mean score of the self-efficacy scale was 11.2 for parents of children less than six years old, 10.1 for parents of six to ten year olds, and 9.1 for parents with children 11 to 18.

### *Healthy Food Purchases and HBM Constructs*

Mean scores for each HBM construct were calculated and one-way ANOVA was used to evaluate whether mean scores significantly differed between those who bought water and those who did not and between those who bought fruit and those who did not (Table 4.10). The fruit purchase row includes respondents who indicated they bought fresh, frozen, and/or canned fruit at the concession stand. Those who bought water reported significantly higher mean scores in knowledge of unhealthy food ( $F=6.70$ ,  $df=64$ ,  $p=.01$ ). In addition, those who purchased water also had significantly higher mean rankings (meaning they rated these factors as less important when making concession purchase decisions) for taste ( $F=4.43$ ,  $df=112$ ,  $p=.04$ ) and child's preference ( $F=8.89$ ,  $df=111$ ,  $p=.004$ ).

**Table 4.10 Mean Scores by HBM Construct and Healthy Concession Sales**

	Scale Range	Bought Water Yes	Bought Water No	Bought Fruit Yes	Bought Fruit No
Knowledge of healthy food	0-4	3.67	3.84	3.78	3.93
Knowledge of unhealthy food	0-7	4.92	4.00*	5.18	4.64
Susceptibility to overweight	0-4	0.58	0.36	0.74	0.53
Self-efficacy	0-12	9.94	10.18	10.28	9.95
<i>Benefits/Barriers</i>	1-7				
Tasty		2.72	1.85*	3.00	2.33
Low Cost		3.44	3.37	3.89	3.30
Health		3.82	3.93	3.47	3.85
Familiarity		4.38	4.33	4.58	4.45
Habit		4.62	5.30	4.37	5.00
Convenience		4.70	4.63	4.21	4.83
Child's preference		3.88	2.54**	4.06	3.38

### Research Question 3: Campaign Materials and Healthy Concession Sales

The third research question examined parents' awareness of the promotional strategies of the social marketing campaign to assess whether or not these cues to action were effective. Based on the responses to one survey item, which asked if the respondent was aware that their sites were participating in the *Smart Choices* campaign, forty-nine respondents (39.5%) from pilot sites were aware. Among these parents, the most frequently recalled promotional items, which served as cues to action, were the point of purchase signs for fruit (71%) and water (63%) (Table 4.11).

**Table 4.11 Materials Recalled by Respondents Who Were Aware of the *Smart Choices* Campaign**

Campaign Materials	Percent (n = 49)
Fruit Point-of-Purchase Sign	71%
Water Point-of-Purchase Sign	63%
Letter to Parents	55%
Stickers	31%
Balloons	31%
Newspaper Article	29%

Table 4.12 compares the percent of respondents who purchased fruit and water by awareness of the campaign. Those who were aware of the campaign were twice as likely to buy water (80%) than

those who were not aware (39%), and those aware of the campaign were six times more likely to buy healthy fruit (27%) than those not aware (4%).

**Table 4.12 Awareness of the *Smart Choices* Campaign and Purchase of Healthy Items**

		Bought Water*		Bought Fruit**	
	N	Yes	No	Yes	No
Aware of the campaign	49	79.6%	20.4%	26.5%	73.5%
Not Aware of the campaign	75	38.7%	61.3%	4.0%	96.0%

\*p<.05, \*\*p<.01

#### Research Question 4: Characteristics of Successful Sites

Although all sites experienced large fluctuations in their water sales, sites A, D, and E were the most successful in terms of fruit sales. These three sites shared some characteristics that could be attributed to their results. These common attributes were related to the characteristics of the contact at the sites, their use of the promotional materials, and the availability of the healthy choices.

First, all three sites had assigned one enthusiastic contact person to the program. These contacts were all genuinely interested in the *Smart Choices* campaign, were easy to reach, and consistently followed through with assigned tasks (i.e., submitting sales data and completing surveys). Although these contact persons were not typically the concession stand operators, they did ensure that the concession stand operators were well trained on the campaign materials and the data collection process.

Second, these sites used the promotional materials very well. They all hung the point-of-purchase signs in visible places at the concession stand. Site A tried to reach more parents by submitting a press release and following up with a contact at the local paper to have a story about *Smart Choices* printed. Site D used point-of-purchase signs, plus directional signs to drive traffic to the concession stands. Site E supplemented the promotional materials supplied by the program with large *Smart Choices* banners.

Finally, the three sites made attractive fresh fruit available at each game and displayed it prominently to catch customers' attention. Site A appealed to consumers who wanted convenience products by pre-cutting fruit and making it available in fruit cups.

The sites that did not fare as well tended to have primary contact persons who lacked interest in the program, and this person, in turn, did not prepare the concession stand operators for the intervention.

Without buy-in from the primary contact, the personnel often did not purchase fresh fruit at all or in insufficient amounts because they doubted they would be able to sell them before they spoiled. These less successful sites also did not use the promotional materials well. For example, the point-of-purchase signs were in the back window of the concession stand at Site C, but customers placed their orders at the front window of the concession stand. Moreover, the less successful sites did not have an adequate way to track refreshment sales.

## CHAPTER 5

### DISCUSSION

The goal of this study was to understand the factors that influence whether or not parents and children purchased healthy foods from the concession stands and to investigate the effects of a social marketing campaign that promoted healthy choices, specifically fruit and water, at concession stands in six Georgia park and recreation facilities. The study was guided by the following research questions: 1) Does a social marketing campaign at concession stands increase the sales of healthy refreshment options (i.e., water and fruit)?, 2) Which constructs of the Health Belief Model are most strongly associated with parents' selection of healthy food choices?, 3) What promotional strategies of the social marketing campaign raise parents' awareness about healthy choices?, and 4) What site-specific characteristics predict successful campaign implementation?

This chapter first examines the implementation and evaluation of the program, which will provide a context for the discussion of the research questions. The following section addresses each of the project's four research questions. Section three discusses the limitations of the program in general and the study's methods. The final section highlights areas for future research.

#### Program Implementation and Evaluation

This project was intended to fill a gap in scientific literature examining the impact of nutrition policy in community-based settings. Most studies investigating the impact of nutrition policy focus on schools, universities, worksites, and a few restaurants, but this intervention took place in six park and recreation facilities—which had no prior experience with offering and promoting healthy choices. In addition, these sites were not familiar with implementing interventions or collecting data. Because the entire process was so new to the sites, implementation varied greatly. The quality and strength of

implementation are key variables that impact the effectiveness of community-based programs (Dusenbury, Brannigan, Hansen, Walsh, & Falco, 2005).

Researchers implementing community-based programs must consider that interventions may not always be delivered in a way that is consistent with the program objectives. Therefore, when outcome-based evaluations are performed, negative results may not be attributed to the actual intervention, but instead, to the way the intervention was delivered. This situation has been dubbed “type III error.” Type III error is defined as “measuring something that does not exist” (Scanlon, 1977, p. 36).

Many of the discrepancies from site to site made comparing across sites difficult. Factors that impacted intervention delivery, and thus may have affected program outcomes, were: differences in number of games, newness of providing fresh fruit, program personalization, and data collection systems. In addition, factors that were beyond the control of the sites, such as the weather, also may have impacted outcomes.

Some sites had games at their sites every week during the intervention period, while others only had games on two of the weeks of the intervention period. Some sites also had large tournaments select weekends, which affected sales data. The sites with more games were able to expose parents and children to the *Smart Choices* campaign and healthy concession choices more regularly. In addition, the sites with more games had more opportunities to collect sales data.

This intervention addressed an environmental factor that researchers have suggested could be the missing piece to many interventions: availability of health options (Wadden, et al., 2002). Offering fruit at the concession stand was very new to park and recreation sites. Therefore, some sites were hesitant to purchase large amounts of fresh fruit, fearing it would not sell and end up spoiling. In addition, when working with the wholesalers or distributors that stock their concession stands, managers found they had very few healthy choices available at the same prices as unhealthy options. Some of the distributors did not even offer fresh fruit as an option.

Some of the sites, such as Site F, bought a small amount of fresh fruit, and sometimes, sold out their inventory. These sites may have had higher fruit sales figures if they would have had more on hand. Site C decided to only purchase canned and dried fruit because of their longer shelf lives, but these options may not have been as appealing to customers as fresh fruit.

Some sites personalized or tailored the intervention, while others put forth minimal effort, which also made it difficult to compare the sites to each other. For example, Site A featured information about *Smart Choices* on their website and had a write up in their local paper about the program. At the concession stand, they used pre-cut fruit cups with *Smart Choices* stickers and hanging fruit baskets to market their healthy selections. Site E had large banners printed with the *Smart Choices* logo. Site C used only the point-of-purchase signs, and they were hung in the back of the concession stand, which was not visible to customers approaching the window to purchase refreshments.

Many of the sites were unaccustomed to collecting data and had no standardized systems for tracking sales data, in particular, which may have lead to over or under-reporting sales of certain items. For example, Site A used a computerized tracking system, whereas Site F did not regularly keep track of sales, but for the *Smart Choices* items, they had sheet of paper next to the register where they marked each time a piece of fruit and/or water sold.

Each of the factors listed above may have impacted fruit and water sales, but some additional factors that were beyond the site personnel's control. For example, at the beginning of the season, the weather was warm, which led to higher sales of cold beverages, including water. However, as the fall temperatures began to drop, beverage, including water, sales began to drop. During on-site observations, many parents and children were drinking coffee and hot chocolate, respectively, as the season progressed. In addition, just making the fruit available during the two-week pre-social marketing campaign period may have biased the study. Finally, without collecting total sales of all snack foods, the percent of sales attributed to fruit could not be calculated. This figure may have been telling, since the sites varied in size and concession sales volume differed greatly at each site.

Although the general sentiment among most concession stand operators was that the *Smart Choices* program was worthwhile and useful, most expressed concerns about the impact of the program on their profits. The sites count on the money from the concession stands for various line items, such as uniforms and equipment. They worry that changing the availability of favorite foods would lead to lower sales. However, the majority of the operators felt that the program would improve with time and parents and children would buy more healthy options in the future, if they were available and regularly promoted.

### Research Questions

The program implementation and evaluation section above highlights some of the site-specific characteristics that may have had a direct impact on the study's main outcome variables: fruit and water sales. There was not significant evidence to support that fruit and water sales means during the intervention period (i.e., the four weeks that the social marketing campaign was implemented) was higher than the sales means than during the pre-social marketing campaign period (i.e., the week before the campaign began). However, there were some general trends indicating that some sites—specifically A, D, and E—did better than others.

The relation between HBM constructs and the sales of healthy refreshments was difficult to study because of sample-specific limitations. First, the sample size was small, and the number of parents who actually purchased healthy items was very small. In addition, the survey respondents were a very homogenous group: mostly White, married moms with at least some college education and a household income higher than \$60K/year. Because of the lack of diversity on the sample, results are not generalizable to other populations. Unfortunately, the sites do not collect demographic data, and therefore, it was difficult to ascertain if these are general characteristics of the parents whose children participate in sports at these particular sites.

Respondents' low levels of perceived susceptibility and severity to overweight and obesity for their children may have been attributed the participants' higher SES and their interest in sports. Childhood obesity and overweight is higher among children living in poverty than those in higher-income



households. In addition, obesity and overweight tend to be more prevalent in neighborhoods without park or recreation centers and areas that parents describe as unsafe (Bethell, Simpson, Stumbo, Carle, & Gombojav, 2010). Respondents mostly had higher incomes and lived in areas where they could access park facilities. In addition, perhaps because their children used the parks and exercised regularly, they felt lower levels of susceptibility.

The respondents' high levels of self-efficacy for changing eating behaviors may be attributed to the age of their children. Parents are able to exert more control over their children's eating habits when they are younger, but their self-efficacy may drop as the children grow older and more independent (Berry, et al., 2004; Golan, Weizman, Apter, & Fainaru, 1998). The mean age for the respondents' children was 9.6 years old. Also, parents' responses may have been biased by social desirability.

On the list of benefits and barriers to selecting healthy choices, only 7% of all respondents indicated that when making a purchase at the concession stand, the health of their selections was their top consideration. The taste and cost of the items were consistently rated higher than health. Although many studies indicate that consumers generally rate taste and cost as more important than health when making food selections, the percentage of parents rating health as important was very low compared to these other studies (Karen Glanz, Basil, Maibach, Goldberg, & Snyder, 1998; O'Dougherty, et al., 2006). One possible explanation for this discrepancy is that parents are largely unaccustomed to seeing healthy choices at their concession stands. Therefore, in the specific context of concession purchases, they do not rate health as an important factor because they may believe purchasing healthy food at the concession stand is unrealistic. Another explanation may be that because they are only at the parks two or three times per week, they view their visits there as "special" and infrequent and therefore, may feel they can indulge. More research is needed in this area to explore these, as well as other possible explanations.

The *Smart Choices* campaign used "play your best game" as the slogan to imply that healthy choices helped improve athletic performance. In the future, health promotion professionals should also

consider promoting healthy choices as being tasty and cost-effective options, instead of marketing them as “healthy.”

When respondents’ knowledge of healthy and unhealthy foods were assessed, those parents who had a better understanding of unhealthy foods were more likely to purchase water than those parents with a lower score on this scale. Parents seem to have a better understanding of unhealthy foods than those that are healthy. However, a quarter of the respondents indicated that hot dogs were a healthy choice. Among parents who purchased fruit, less parents rated canned and dried fruit as being healthy than fresh fruit. Parents may correctly believe that canned fruit is unhealthy when it is packaged in sugar sweetened juice or syrup. The survey item would have been clearer if it included a description of canned fruit (i.e., canned in its own juice with no sugar added). Additionally, parks that use canned fruit should use fruit canned in its own juice, and educate parents about these products and their healthfulness.

Another item on the food health knowledge scale was sports drinks. Most parents (69%) indicated that they thought sports drinks were *very healthy* or *healthy*. Parents may be under the impression that these drinks are healthy because they are marketed as being able to enhance athletic performance and necessary to replenish electrolytes. However, sports drinks are not necessary for casual athletes. Parents need to understand that these drinks are sugar-sweetened beverages, like sodas, that contribute to obesity and overweight.

The third hypothesis was that parents who were aware of the campaign (i.e., had seen a cue to action to purchase a healthy option) would be more likely to purchase healthy foods than those who do not recall cues to action. Having a general awareness of the *Smart Choices* campaign was significantly associated with the purchase of fruit and water. Parents who were aware of the campaign were two and six times more likely to buy water and fruit, respectively, than those who were not aware. This awareness could be the result of exposure to several campaign-related materials, even though the respondents were not able to pinpoint exactly which one.

Although the social marketing campaign resulted in increased sales of fruit and water at some sites, others struggled to sell their healthy items. However, in response to research question four, there seemed to be common traits among the sites that had the best results. First, they all had a strong commitment to the project. At the sites where staff lacked enthusiasm and/or ownership of the project, healthy food sales suffered. Second, the more successful sites were more creative and while adhering to the main goals of the *Smart Choices* campaign, they also incorporated strategies that would specifically appeal to their customers. Backer has referred to this concept as the fidelity/adaptation balance (CSAP, 2001). Site A's marketing of pre-cut fruit was innovative. The concession operator knew his customers purchased convenience products, and he made the fruit convenient for them. Site D was very large, and by using directional signs to the concession stand throughout the park, they were able to increase traffic at the stands.

#### Limitations

Two important limitations of this project were the very small sample size and short intervention period. In addition to only having six self-selected pilot sites participate, some sites did not turn in all of their data, and others had very little data because they did not host games at their sites regularly throughout the season. The parent survey also yielded a small response rate. Although many parents started the online survey, very few completed it. Both the samples (sites and parents) also lacked a comparison group. Finally, the intervention period only lasted four weeks, which may not have been enough time to track trends. However, the pilot study yielded some important insights that may help with implementation of similar programs in the future.

As mentioned previously, some of the limitations were specific to the program implementation because implementing a health intervention and collecting associated data were new concepts to parks and recreation sites. Some of the sites went above and beyond the expectations of the program, while other did not meet basic criteria. This variance in implementation may have had a direct impact on water and fruit sales.

Another limitation of this intervention was that fruit was offered in addition to all concession stand options. Higher sales may have resulted if managers eliminated some of the unhealthy options. Moreover, even though most sites displayed their fruits on the counter, or in another highly visible location, this placement usually also meant that the fruit was displayed alongside another top seller: candy. Thirty percent of parents indicated they send their child to the concession stand to make purchases, and when a child sees those two options side-by-side, the child is probably going to select the candy.

### Future Directions

GRPA has expressed interest in building a *Smart Choices* area on their website, where all sites across the state could access the materials associated with the project. As a result of this study, GRPA will emphasize the materials that most parents recalled (i.e., the point-of-purchase signs and parent letters). In addition, GRPA would like for sites to include more healthy options at their concession stands and offer healthier vending machine foods.

To further promote the use of *Smart Choices* resources, GRPA suggested that they would like to host a workshop at their annual conference on the topic and help sites promote healthy choices. Site managers, not concession stand operators, are the target audience for these meetings, but without buy-in from the individuals staffing the concession stand, the program will likely be unsuccessful. Therefore, part of GRPA's session on this topic should include how to persuade and incentivize concession stand managers to promote healthy options.

As a result of this intervention, GRPA has gained more interest in the healthy options policy, as well as *Smart Choices*. If they were to provide support for the *Smart Choices* campaign online and at their annual conference, the sites' implementation would be most successful if GRPA earmarked some implementation funds. They could consider using a competitive mini-grant proposal process to select additional sites to implement *Smart Choices*. Once several sites saw promising results, the program

would be more likely to spread. GRPA may also use funds to subsidize sites that choose to purchase more healthy options so that they will be able to make more money off the sales of these items.

Before implementing *Smart Choices* on a bigger scale, sites would need more in-depth information about how to use the materials. Training site personnel on program implementation and evaluation may be helpful so that there are clearer guidelines about the adaptation of the program and the impact site-specific characteristics have on the sales of healthy options. In the case of *Smart Choices*, sites that made program modifications and incorporated creative marketing approaches to the basic campaign materials had better outcomes.

Program developers and researchers sometimes worry that the community-based programs they design and evaluate will lose effectiveness when they are changed or adapted by the sites where they are implemented. However, the community-based organizations that implement programs may also be concerned that without the ability to make modifications, the program may not be relevant to their communities. There is significant evidence that certain key elements of a program must be strictly adhered to for the best results, but some local adaptations may also be necessary (CSAP, 2001). Giving other GRPA sites the flexibility and resources they need to strike the balance between fidelity and adaptation may be critical to the success of future iterations of the *Smart Choices* campaign.

As the campaign spreads to more sites, each community should be encouraged to make the program their own and use approaches they believe will fit best with their customers. GRPA should encourage, track, and share these novel approaches across the state. GRPA should also engage in a more in-depth evaluation of the strategies employed and their effectiveness. Additional social marketing strategies related to price, product, and promotion should also be tested and evaluated at sites that implement *Smart Choices* in the future.

Since many parents rated cost as one of the top three factors they consider when making concession purchases, innovative pricing strategies may be useful. Most sites sold whole fruit for between 50 cents and 1 dollar, which was similar to the price of a small bag of chips or a package of

candy. Additionally, water was often priced similarly to other drinks. Some studies have indicated that reducing the price of healthy choices may increase their sales (Buscher, et al., 2001; Cinciripini, 1984; French, 2003). Most site personnel also mentioned that pricing strategies (i.e., price reductions for healthy foods) would probably also sell healthy foods. However, sites may also want to consider increasing the price of unhealthy foods to discourage the purchase of these items.

Some creative products mentioned in the concession stand operators' surveys for future use were "combo deals" and "snack packs." "Combo deals" with healthy foods, as more became available may also lead to higher sales of healthy items. For example, concession stands could offer a chicken or veggie sandwich with a water bottle and a side of fresh fruit. Healthy "snack packs" would feature enough healthy food and drinks for the whole team and would be marketed to the team moms or dads who were assigned to bring snacks for practice or a game. Concession personnel added that this would be more successful if the sites enforced their healthy snack policies. Most of them have guidelines for what parents are and are not allowed to provide for the teams, but the guidelines are generally not followed.

The program may need more promotion, including some parents to champion the cause and promote *Smart Choices* among other team moms and dads. This first iteration of this project was missing word-of-mouth marketing. Involving some mothers and/or fathers in the campaign in the future might be helpful. Parental intake of healthy foods (i.e., fruits and vegetables) has been linked to higher intake of these foods among their children (van der Horst, et al., 2007). Therefore, parents would be able to not only promote the healthy choices, but also serve as positive role models for their children. Other types of promotional activities that may be helpful are menu labeling, giveaways (e.g. rubber bracelets, stickers, etc.) for purchasing *Smart Choices*, coupons, media events, and public service announcements.

As GRPA plans more sites for *Smart Choices*, they may also want to consider developing messages aimed directly at educating parents about sports drinks, since many parents perceive these drinks to be healthy. Parents may need to better understand the amount of sugar in sports drinks and the health implications associated with their consumption. Sites could use visual cues, such as displaying a

12 ounce plastic sports drinks bottles containing 7 teaspoons of sugar, to depict this concept clearly.

GRPA should also consider more drastic measures, such as eliminating sports drinks from their concession stands entirely or increasing their prices dramatically.

To improve the health of concession selections even further, GRPA should encourage sites to replace unhealthy items with healthy ones. This would eliminate some of the temptation to buy the unhealthy items, and sites would not have to buy food above and beyond their regular inventories. Since most parents indicated that mostly they purchase snacks from the concession stands, these are the types of items concession stand operators should begin to exchange for healthier options.

Another measure sites could use to educate parents about unhealthy and healthy refreshments is calorie labeling. Some evidence from studies done in restaurant or cafeteria settings has suggested that calorie information may influence the purchase of foods. Calorie labeling shows the most promise when combined with promotional messages (Lisa Harnack & French, 2008). Using *Smart Choices* plus menu labeling may dissuade some parents from selecting unhealthy refreshments.

Finally, a campaign like *Smart Choices* would have the most impact if it reached children everywhere they were (Flynn, et al., 2006; Nestle & Jacobson, 2000; Thomas, 2006). For example, if schools, local libraries, and community centers adopted the *Smart Choices* campaign, children and parents would be exposed to the messages regularly. In addition, all of these sites would need to offer healthier choices. The availability of and promotion of these foods throughout communities would break down some of the barriers associated with a healthier diet.

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## APPENDICES

A: GRPA Resolution



**A GRPA Resolution  
On  
Healthy Food and Beverage Sales at Concession Stands  
And in Vending Machines in Local Park and Recreation Settings**

Whereas, overweight and obesity is epidemic in Georgia, affecting all segments of the population; and

Whereas, 61% of adults are either overweight or obese; and

Whereas, the Georgia Student Health Survey (2003) indicates that 33 percent of middle school students and 26 percent of high school students are either overweight or at risk for overweight; and

Whereas, overweight and obesity is associated with increased mortality as well as higher rates of cardiovascular disease, diabetes, stroke, hypertension, gall bladder disease, osteoarthritis, and some types of cancer; and

Whereas, population attributable risk calculators show that 10% of total adult deaths in Georgia in 2000-2003, or 6,700 deaths, would not have occurred if all Georgia adults were of optimal weight; and

Whereas, the annual cost of obesity in Georgia-from direct health care costs and lost productivity-is estimated at \$2.1 billion; and

Whereas, the immediate cause of the epidemic is an imbalance between energy intake (food consumption) and energy output (physical activity); and

Whereas, many park and recreation agencies in Georgia are leading an effort and engaging communities and individuals to Step up to Health;

**NOW, THEREFORE, BE IT RESOLVED:**

That GRPA urges park, recreation, and community service agencies to promote the consumption of a variety of nutrient-dense foods within and among the basic food groups while choosing foods that limit the intake of saturated and trans fats, cholesterol, added sugars, salt and alcohol (2005 Dietary Guidelines for Americans); **and be it further**

Resolved, that GRPA recommends that foods of minimal nutritional value be limited in vending machines, at concession stands, or otherwise in park, recreation, and community service agencies; **and be it further**

Resolved, that GRPA recommends that park, recreation and community services agencies use the attached standards for choices in vending machines, concession stands or otherwise, increasing the percentage of choices from the “Best” or “Acceptable” category for snacks and beverages; **and be it further**

Resolved, that park, recreation and community service agencies consider marketing the “Best” and “Acceptable” snack and beverage options at a lower profit margin to encourage selection by children and other community members; **and be it further**

Resolved, that GRPA urges that drinking fountains and/or other clean potable water sources be maintained to provide healthy hydration to all users and visitors of park, recreation, and community service agency facilities year round; **and be it further**

Resolved, that park, recreation and community service agencies consider the adoption of this resolution locally and that it be distributed by each local park, recreation, and community service agency to groups, parents, associations, organizations, and others that operate concession stands or vending machines in parks or provide food items to participants in any recreational program.

Adopted this 15<sup>th</sup> day of March, 2006 by the Board of Trustees of the Georgia Recreation and Park Association in official session at Americus, Georgia.

Signed: Jimmy Gisi  
President

Signed: Deloris Covell  
Secretary

## B: Healthy Options

### Vending Machine & Concession Stand Choices

Park and Recreation agencies, parents, and other organizations that are in charge of stocking vending machines and/or operating concession stands should include at least some healthy food choices in their offerings. The table below provides a list of foods that should be offered in limited quantities and those that should be emphasized (Best and Acceptable):

<i>Vending Machine Choices</i>			<i>Concession Stand Choices</i>			<i>Beverage Choices</i>		
BEST	ACCEPTABLE	LIMITED	BEST	ACCEPTABLE	LIMITED	BEST	ACCEPTABLE	LIMITED
Animal crackers, graham crackers, whole grain crackers	Granola bars, whole-grain fruit bars	Cookies (including low fat)		Granola bars, whole-grain fruit bars	Candy bars	Milk, any flavor- preferably non-fat or low fat (1%); size: 8oz	Milk, 2%, whole size: 8oz	
		Candy, candy bars, chocolate bars, toaster pastries, marshmallow/cereal treats	Low-fat or fat free mayonnaise, mustard, lettuce and tomato for sandwich toppings		Mayonnaise, cheese sauce, chili cheese sauce	Juice- fruit and vegetable that contains 100% juice; size: 6oz.	Juice- fruit or vegetable that contains at least 50% juice size: 6oz	
Pretzels	Baked chips, corn nuts, rice cakes, cereal/nut mix	Regular chips, cheese-flavored crackers, cracker sandwiches	Turkey and veggie burgers, turkey sandwiches	Reduced fat hot dogs	Hot dogs, hamburgers,	Water, pure	Flavored or vitamin-enhanced fitness water, sparkling water	
Nuts and seeds- plain or with spices	Nuts with light sugar covering; honey coated	Candy-or-yogurt-coated nuts	Vegetables and low fat dip	Soft pretzels, baked chips	Chips, French Fries		Low-calorie, diet sodas, low-calorie iced tea, low-calorie coffee	Regular soft drinks, sports drinks, sweetened tea; size: 12oz.
Trail mix (plain)	Popcorn/nut mix	Trail mix with chocolate, yogurt, or candy	Fresh, dried, or canned fruit		Sugary candy			
Fresh vegetables and fruit, single-serve canned fruit, dried fruit	Fruit leathers	Candy- or sugar-coated dried fruit	Vegetable topping pizza	Cheese pizza	Pepperoni pizza			
Fat-free popcorn	Light popcorn	Buttered popcorn	Yogurt, preferably non-fat, low-fat or light	Sugar-free gelatin, fat-free pudding, fruit based popsicles	Ice cream			
Beef jerky 95% fat free		Sausage, pork rinds						
**Special note about portion sizes: Always offer the smallest portion size of all of the above listed foods. Limit the availability of large grab bags of chips and extra large candy bars. The same applies for beverages. Offer 8 ounce milk cartons, 6 ounce juice boxes, and 12 oz cans of diet soda. **								

Adapted from Georgia Action for Healthy Kids, [www.actionforhealthykids.org](http://www.actionforhealthykids.org)

**INSERT DEPARTMENT NAME] Urging Parents and Children to “Make the SMART CHOICE”  
at their Concession Stand**

[Insert Date]

[Insert Department Name] today announced that they have been selected by Georgia’s Nutrition and Physical Activity Initiative to participate in a new program to combat childhood obesity. The program stems from Georgia Recreation and Park Association’s (GRPA) adoption of a resolution entitled, *Healthy Food and Beverage Sales at Concession Stands and Vending Machines in Local Park and Recreation Settings*. The GRPA is asking all sites to provide the opportunity for individuals to make healthy food and beverage choices. In the upcoming months, [Insert Department Name] will provide customers with more fruit at their concession stand and will test promotional strategies to boost the sales of fruit and bottled water.

Parents and children should look for “Make the SMART CHOICE” logo at the concession stand and purchase the foods associated with logo, specifically water and fruit. Parents will also be encouraged to complete short surveys about the campaign and the impact it has had on their families.

[insert quote from Director, Mayor, Program Manager or other] [example quote]"With the adoption of the Healthy Food and Beverages Resolution community members will have the opportunity to purchase nourishing food at our sites. Program participants can select foods and beverages that fuel their activities on the tennis courts, in the gym, or on our trails," said [insert name], [insert title], [insert organization]. "We are also happy to be partnering again with GRPA, and for the first time with Georgia’s Nutrition and Physical Activity Initiative who are actively involved in improving health in our community and throughout Georgia."

[insert quote from GRPA] [example quote] "We're excited to partner with [insert department name] on such an important initiative to promote healthy lifestyles in our communities," commented [insert name], [insert title], GRPA.

Please visit [Insert Department Name]’s concession stand this weekend and “make the SMART CHOICE!”

**About [Insert Department Name]**

[Insert Department Mission] [for example] The mission of the Decatur Recreation & Community Services Department ("The Rec") is to provide leisure and support services that contribute to the quality of life of the citizens of Decatur. The Rec is committed to enhancing the lives of individuals and families, contributing to the city's economic development, promoting an appreciation for Decatur's greenspaces, and celebrating diversity

**Contact Info:**

[Insert Name]

[Insert Department Name]

[Insert Phone Number]

D: Parent Letter

[INSERT DATE]

Insert your site's  
logo here and *Smart  
Choices* logo

Dear Parents and Coaches:

Welcome to the [INSERT NAME OF CITY/COUNTY] Parks and Recreation Department! We are excited that your children will be participating in activities at our site. We would like to take this opportunity to tell you about a new initiative that we are supporting because we are concerned with children's health.

As you know, childhood obesity is a major problem in our country, and as parents and youth leaders, we must work together to halt the spread of this epidemic. In order to have the biggest effect on children's health, we need to engage them in physical activity and promote good nutrition. By enrolling your child in one of our programs, you are providing them with an opportunity to be active, which will promote lifelong fitness. However, proper nutrition is just as essential as physical activity for your child's health, and now there is something you can do at the Parks and Recreation Department to provide your child with the "SMART CHOICE" when it comes to food and drinks.

Here at [INSERT NAME OF CITY/COUNTY] Parks and Recreation Department, we are working hard to provide more nutritious foods at our site as a part of a project being brought to us by Georgia's Nutrition and Physical Activity Initiative. This project encourages you to "Make the SMART CHOICE" and buy water and/or fruit for yourself and your children at our concession stands. By consuming these refreshments yourself, you are role-modeling healthy behaviors for your children, and by buying them for your children, you will be ensuring that they get a nutritious snack. In addition, you should encourage your children to select the "SMART CHOICE" whenever they visit the concession stand without you. These "SMART CHOICES" will be easy to spot...just look for the logo that is on the top left-hand corner of this letter.

Healthier foods will not only help prevent childhood obesity, but they will also provide children with the energy and nutrients they need to perform better on the playing field, at home, and at school. We hope that you will support our efforts and follow the guidelines on the back of this letter when planning snacks for your children and players.

Please feel free to contact me if you have any questions about this program or healthy snack choices.

Have a great season!

Sincerely,

[INSERT NAME OF DIRECTOR]

[INSERT NAME OF CITY/COUNTY] Parks and Recreation Department

## E: Letter to Concession Stand Operators

Dear Concession Stand Operators:

We are very excited to adopt a resolution, titled “Healthy Food and Beverage Sales at Concession Stands and in Vending Machines in Local Park and Recreation Settings.” This resolution was signed by the GRPA Board because they recognize the importance of making policy changes in order to promote healthy lifestyles. This park and recreation site is taking action based on the resolution and urging you to do your part to fight childhood obesity.

The resolution, which is attached, also includes a grid of food choices. These items are organized into limited, acceptable, and best categories. We hope that you will support our efforts by providing less food and drink items from the limited category and more from the best.

For the first few weeks of the resolution adoption, we are focusing on providing our customers with more fruit and water at the concessions stands. Below are some tips to assist you as you purchase, market, and sell fruit and water at your site!

### PURCHASING FRUIT AND WATER...

- BUY BAGS OF FRUIT THAT ARE IN-SEASON
- CHECK THE PRODUCE AT YOUR LOCAL WAREHOUSE STORES FOR GOOD PRICES
- BUY PRE-PACKAGED BAGS OF CUT UP FRUITS, LIKE APPLES
- USE DRIED FRUIT, SUCH AS RAISINS OR FRUIT LEATHER (NOT FRUIT ROLL-UPS)
- BUY CANNED FRUIT (PACKED IN ITS OWN JUICE OR LIGHT SYRUP)
- BUY GENERIC BRAND BOTTLED WATER IN BULK
- ASK COMMUNITY PARTNERS TO DONATE BOTTLED WATER AND SELL FOR PROFIT

### MARKETING/SELLING FRUIT AND WATER...

- LINE A BASKET WITH A COLORFUL NAPKIN AND PUT FRESH FRUITS IN IT
- HAVE "MEAL DEAL" OFFERS WITH A SANDWICH, WATER, AND A PIECE OF FRUIT
- OFFER FRUIT AT A REDUCED PRICE OR GIVE AWAY COUPONS
- HAVE FREE "SAMPLES" OF A FRUIT OF THE WEEK
- OFFER FRUIT CUT UP, INSTEAD OF WHOLE
- THROW AWAY FRUIT AND VEGETABLES THAT ARE ROTTING
- OFFER OVERRIPE FRUIT AT A DISCOUNTED RATE
- DISPLAY FRUITS OF DIFFERENT COLORS (E.G., APPLES, ORANGES, AND BANANAS)
- USE THE POINT OF PURCHASE SIGNS
- USE THE PROGRAM INCENTIVES
- WEAR THE PROGRAM APRONS

Thank you all for your support. Please do not hesitate to contact me if you have any questions.

Sincerely,

Director

[INSERT NAME OF COUNTY/CITY] Recreation and Park Department



Part of the Game!



**INSERT SITE NAME HERE**

**encourages you to make the SMART CHOICE!**



**Buy fruit, a SMART CHOICE,  
and play your BEST GAME!**

<b>INSERT SITE LOGO</b>	<b>INSERT SITE NAME HERE</b>	<b>INSERT SITE LOGO</b>
	<b>Parks and Recreation encourages you to make the SMART CHOICE!</b>	

**SMART** CHOICES:  
PART OF THE GAME.



**Buy water, a SMART CHOICE,  
and play your BEST GAME!**

**INSERT SITE  
LOGO HERE**

**INSERT SITE NAME HERE**

**encourages you to make the  
SMART CHOICE!**



**Buy water, a SMART CHOICE,  
and play your BEST GAME!**

***SMART***



***CHOICES***

**Part of the Game!**

## H: Letter to Potential Community Partners

**[Insert Date]**

Dear Community Partner:

**[Insert name of GRPA facility]** is dedicated to encouraging a healthier lifestyle for the children that participate in our fun-filled physical activities and their families. Lifelong habits are developed early and we understand that healthy eating is just as important as regular physical activity. We have, therefore, joined with Georgia's Nutrition and Physical Activity Initiative and Governor Perdue's Live Healthy Georgia Campaign to promote healthy eating in our facility.

To show commitment to these efforts, the Georgia Recreation and Parks Association has adopted a *Healthy Food and Beverage Sales at Concession Stands and Vending Machines in Local Park and Recreation Settings* resolution. This resolution urges individual park facilities, like ours, to limit high-fat and high-sugar food items and serve healthier items instead.

I am writing to ask that you partner with us by offering your support. We are in need of donations that will help us as we work to increase healthy offerings at our facility, specifically fruit and water. We would very much appreciate the donation of items that promote healthy eating (e.g., fruits-dried, canned, and/or fresh and bottled water) or financial donations (to assist us in purchasing healthy food and drink items). We need the community's involvement to be successful. Donations can be mailed to:

**[Insert mailing address]**

or delivered to:

**[Insert physical address]**

Thank you in advance for your participation, and please do not hesitate to contact me if you have any questions.

Sincerely,

Director

**[Insert name of GRPA facility]**



## I: Weekly Sales Reporting Survey (Online)

### 1. Site Information

Your Name: \_\_\_\_\_

Park and Recreation Department you represent:

- |                                 |                                 |                                 |
|---------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> Site A | <input type="checkbox"/> Site B | <input type="checkbox"/> Site C |
| <input type="checkbox"/> Site D | <input type="checkbox"/> Site E | <input type="checkbox"/> Site F |

### 2. Initial Implementation Information-ASKED ONLY WEEK 1

Did you receive the "Smart Choices" promotional signs?

Yes	No	N/A
-----	----	-----

Did you receive the "Smart Choices" black folder, which included the CD with all program materials?

Yes	No	N/A
-----	----	-----

Have you distributed the "Smart Choices" press release to local outlets?

Yes	No	N/A
-----	----	-----

Have there been any stories in your local media about "Smart Choices?"

Yes	No	N/A
-----	----	-----

Have you hung your "Smart Choices" signs around your site and/or concession stand?

Yes	No	N/A
-----	----	-----

Have you distributed copies of the "Smart Choices" parent/coaches letter?

Yes	No	N/A
-----	----	-----

Have you posted information about "Smart Choices" on your website?

Yes	No	N/A
-----	----	-----

Have you used the "Smart Choices" stickers on your concession stand menu(s)?

Yes	No	N/A
-----	----	-----

### 3. Sales Data-ASKED EVERY WEEK

The following questions are about the sales of *Smart Choices* refreshments (water and fruit) at your

concession stand(s) for the [INSERT 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup>] week in [INSERT September, October, or November] ([RANGE OF DATES HERE]). I will continue to track this information throughout October and November to see if by spreading the word about the *Smart Choices* program, we can increase sales of these items.

**Please provide the following information about beverage sales for the [INSERT 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup>] week in [INSERT September, October, or November] ([INSERT DATE RANGE HERE]). Please indicate whether you are providing # of bottles/cans or # of cases. If cases, how many bottles/cans per case?**

Number of units of water sold

Number of units of soft drinks/Cokes sold

Number of units of sports drinks (PowerAde/Gatorade) sold

**Please provide the following information about fruit sales for the [INSERT 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup>] week in [INSERT September, October, or November] ([INSERT DATE RANGE HERE]):**

Fresh fruit (Please indicate which types of fresh fruit and how many were sold.)

Canned fruit (Please indicate which types of canned fruit and how many were sold.)

Dried fruit (Please indicate which types of dried fruit and how many were sold.)

#### **4. General Comments**

Please provide any additional feedback about the "Smart Choices" program here. I am open to suggestions, feedback you have heard from parents, materials you need, etc.

I appreciate your support! Do not hesitate to contact me if you need anything.

## J: Concession Stand Operator Survey

November, 2007

Dear Concession Stand Operators/Pilot Site Personnel:

Thank you for participating in our *Smart Choices* campaign ("A Policy Approach to Encourage Healthy Eating at Georgia Recreation and Park Facilities") over the past few weeks. Leslie Rodriguez (404.667.8727), a doctoral student in the Department of Health Promotion and Behavior at The University of Georgia, under the direction of Professor Pamela Orpinas (706.542.4372), is helping us evaluate the campaign at our pilot sites. You may contact Leslie about this research. Results from this program evaluation may be published; all results will be reported in aggregate form. This survey is part of Leslie's research. No individual sites will be identified, and this survey will not affect your standing with the GRPA.

Please complete the survey to help us better understand the implementation of the campaign. We are hoping to learn more about how to promote healthy choices at our concession stands. The survey is voluntary and confidential, and takes about 10 minutes to complete. You can refuse to participate or withdraw at any time without penalty. There are no foreseeable risks associated with completing this survey. The benefit of completing this survey is that you may learn how to make healthier foods available to the families that frequent your park, which may improve their health.

*Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.*



Park and Recreation Department you represent:

☐ Site A   ☐ Site B   ☐ Site C   ☐ Site D   ☐ Site E   ☐ Site F

Which of the following items did you use to promote your healthy options? (Check all that apply.)

- ☐ Sign encouraging water purchases at the concession stand
- ☐ Sign encouraging fruit purchases at the concession stand
- ☐ Parent letter from the site about healthier concession choices
- ☐ Concession stand operator letter about healthier concession choices
- ☐ Letter to community partners soliciting support for resolution
- ☐ Press release sent to local papers
- ☐ If the press release was sent, did your local paper(s) run a story on the resolution
- ☐ Concession stand operator aprons
- ☐ Stickers for children
- ☐ Bracelets for children
- ☐ Balloons
- ☐ Others: \_\_\_\_\_

1. Please list the healthy items that you offered at your concession stand(s) as a result of adopting the resolution:
2. Which resources were most helpful for promoting fruit and water and why?
3. What barriers or problems did you face when trying to promote healthy food, particularly fruit and water? How did you overcome them?
4. What improvements would you suggest to make the program more successful?
5. How did parents react to the advertisement for fruit and water? How did children react?
6. Did you replace any of your “less healthy” items with the more healthy items?

K: Parent Survey

***For the following questions, think about the child who participated in the league for which you are attending this party (or if on website-whose team is on this website).***

**Name of Park:**

☐Site A   ☐Site B   ☐Site C   ☐Site D   ☐Site E   ☐Site F

**1. Your child's age:** \_\_\_\_\_ years old

**2. Your child's gender:**                      Male                      Female

**3. Your child's sport (this season):** Football                      Soccer                      Baseball

Other: \_\_\_\_\_

**4. Which best describes your child's weight?**

Underweight              Just Right              A Little overweight              Somewhat Overweight              Very Overweight

**5. Do you think your child's weight is a problem now?**                      YES                      NO

**6. Do you think your child's weight may be a problem in the future?**                      YES                      NO

**7. On most days, your child eats....** Too Little                      Just Right                      Too Much

**8. On a scale from 0 to 10, rate the likelihood that your child will become overweight or obese over a lifetime. [Check N/A if you answered in #4 that your child is a little, somewhat or very overweight.]**

0	1	2	3	4	5	6	7	8	9	10	N/A
Not at all likely										Extremely likely	

9. On average, how often does your child eat or drink the following...	More than once a day	Once a day	3-6 times per week	1-2 times per week	1-3 times per month	Rarely/ never
Sweets (candy, ice cream, cake, or pastries)						
Snack food (potato chips, cheese puffs, Doritos)						
Fruits (apples, raisins, canned fruit)						
Vegetables (carrots, salad, not including potatoes)						
Sodas (Coke, Sprite, not including die sodas)						
Sports Drinks (PowerAde, Gatorade)						
Fast food restaurant (McDonald's, Burger King, etc.) items						

**10. Which best describes your use of the concession stand at the park site where your child plays? (Check all that apply)**

- ☐ I buy items at the concession stand for myself
 ☐ I buy items at the concession stand for my child  
☐ I send my child to buy concession stand items
 ☐ We eat *snacks* from the concession stand  
☐ We eat *meals* from the concession stand

11. When making decisions about what to purchase at the <u>concession stand</u> , how important are these factors? Please rank them from most important (1) to least important (7).	Ranking
Tasty food	
Low cost	
Healthy food	
Familiarity	
Habit (Tradition to buy something)	
Convenience (packaging, easy to eat)	
Child's preference	
Other: _____	

**12. Please indicate whether or not you bought the following items at the recreation and park facility's concession stand over the past season. Also, indicate how unhealthy or healthy you perceive each item to be.**

Food or Beverage	Did you purchase in past season?		How healthy do you think this item is?			
	Yes	No	Very healthy	Somewhat Healthy	Somewhat Unhealthy	Very Unhealthy
Water						
Fruit-fresh						
Fruit-dried						
Fruit-Canned						
Soft pretzel						
Sports drink						
Hamburger						
Pizza						
Hot Dog						
Candy						
Chips						
Soda						
Other: _____						

**13. How confident are you in your ability to improve your child's eating habits?**

Very confident      Confident      Somewhat Confident      Not at all Confident

**14. How confident are you in your ability to make your child eat fruits?**

Very confident      Confident      Somewhat Confident      Not at all Confident

**15. How confident are you in your ability to make your child drink water instead of sodas or sport drinks?**

Very confident      Confident      Somewhat Confident      Not at all Confident

**16. Are you aware that this concession stand is participating in a program to increase the purchase of fruit and water?**

YES

NO

17. Do you remember seeing any of the following at the recreation and park facility you frequented over the past season (i.e., 6 weeks)?	Yes	No
Newspaper article about healthy choices at this site		
Sign encouraging you to choose water at the concession stand		
Sign encouraging you to choose fruit at the concession stand		
Balloons with the SMART CHOICE logo		
Letter from the site about healthier concession choices		
Aprons concession stand operators wore encouraging the SMART CHOICE		
Stickers for your children with the SMART CHOICE logo		
T-shirts with the SMART CHOICE logo		
Other: _____		

**To better understand the people that use this park and recreation site, I need some demographic information. Please complete the following 6 questions. Remember, your answers are completely anonymous. Thank you!**

**1. I am a:** Mom                      Dad                      Grandparent                      Guardian                      Other

**2. Number of kids (under 18) in my household:** \_\_\_\_\_

**3. The highest level of education that I have achieved is:**

Some High School              Graduated High School              Some College

Graduated College              Some Graduate School              Completed Graduate Degree              Other

**4. My race/ethnicity is:** White      African-American      Hispanic              Asian-American              Other

**5. My household income is:**

\$0-15,000      \$15,001-30,000      \$30,001-45,000      45,001-60,000      60,001+

**6. My marital status is:** Married              Divorced              Single

[www.gwinnettforum.com/issue/07.1023.htm](http://www.gwinnettforum.com/issue/07.1023.htm)

### to offer "smart choice" at parks vending areas

The  Parks and Recreation Department has been selected by Georgia's Nutrition and Physical Activity Initiative to participate in a new program to combat childhood obesity. The program stems from Georgia Recreation and Park Association's (GRPA) adoption of a resolution entitled, "Healthy Food and Beverage Sales at Concession Stands and Vending Machines in Local Park and Recreation Settings." This resolution asks sites to provide the opportunity for individuals to make healthy food and beverage choices. In the upcoming months,  Parks and Recreation will provide customers with more fruit at their concession stand and will test promotional strategies to boost the sales of fruit and bottled water.

Parents and children should look for the "SMART CHOICE" logo at the concession stand when purchasing the foods associated with logo, specifically water and fruit..

Jimmy Gisi, Executive Director, GRPA, says: "With the adoption of the Healthy Food and Beverages Resolution, community members will have the opportunity to purchase nourishing food at our sites. Program participants can select foods and beverages that fuel their activities on the courts, in the fields, or in gyms."