

From Policy to Practice: Addressing Snack Quality, Consumption, and Price in After-School Programs

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ABSTRACT

Objective: To evaluate a community partnership between after-school programs (ASPs) and grocery stores to provide discounted pricing on snacks to meet the National Afterschool Association Healthy Eating Standards that call for serving a fruit or vegetable (FV) daily while eliminating sugar-based foods and beverages.

Methods: A single-group, pretest with multiple posttest design (spring, 2011–2013) in 4 large-scale ASPs serving 500 children/d was used, along with direct observation of snacks served, consumed, and cost.

Results: At baseline, FV, sugar-sweetened beverages, and desserts were served 0.1 ± 0.5 , 1.7 ± 2.0 , and 2.0 ± 1.4 d/wk. By spring, 2013, FV increased to 5.0 ± 0.0 d/wk, whereas sugar-sweetened beverages and desserts were eliminated. A total of 84% of children consumed the fruit; 59% consumed the vegetables. Cost associated with purchasing snacks resulted in a \$2,000–\$3,000 savings over a standard 180-day school year.

Conclusions and Implications: This partnership can serve as a model for successfully meeting nutrition policies established for ASP snacks.

Key Words: cost, nutrition, snack, children, school (*J Nutr Educ Behav.* 2014;46:384–389.)

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INTRODUCTION

Nationally, after-school programs (ASPs) serve more than 8.4 million children, the majority of whom are elementary age.¹ One of the major components of the ASP schedule is the provision of a snack. This snack represents an important part of a child's overall daily dietary intake by providing sustenance between school lunch and dinner at home.² Evidence to date indicates that the nutritional quality of the foods and beverages served as snacks in ASPs falls short of existing nutrition standards for snacks in ASPs; the majority of the foods served contain high amounts of sugar

(eg, cookies, candy) and sodium (eg, chips), and the beverages primarily are sugar-sweetened.^{3,4} Conversely, healthful foods and beverages, such as fruits, vegetables, and water, are almost entirely absent.^{3,4}

To address snack quality in ASPs, the National Afterschool Association developed the Healthy Eating Standards, which were subsequently adopted by the YMCA. The Healthy Eating Standards specify that all ASPs should serve fruits or vegetables every day, serve water as the primary beverage, and eliminate sugar-based foods and beverages. Previous studies have shown that adopting clear nutritional guidelines can significantly

improve the types of foods and beverages served for snacks.^{4,5} However, the sustainability of changes to program practices remains in question, particularly because of potential issues surrounding cost associated with serving fruits and vegetables and whether children will consume “healthier” snacks. Cost is a major barrier to meeting existing nutritional guidelines for snacks in ASPs.^{6–8} In addition, studies indicate that a large portion of the fruits and vegetables served to children, primarily during school lunch, go uneaten.^{9–11} Thus, although short-term changes in meeting the standards have been achieved,^{3,4,12} it is unclear whether they are sustainable. Therefore, the purpose of this study was to evaluate an innovative partnership between 4 YMCA ASPs and a local grocery store chain on (1) meeting the Healthy Eating Standards, (2) the costs associated with meeting the Healthy Eating Standards, and (3) whether children consume the healthier snacks.

METHODS

Participants

The 4 participating ASPs were part of a midsize YMCA association with

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5 branch associations, 4 of which provide youth programming. The organization was taking part in a 2-year policy-level intervention focused on physical activity and nutrition grounded in the principles of community-based participatory research.¹³ The information presented in this brief focuses solely on the changes to snacks across the 2-year study. The ASPs served approximately 500 children/d (5–12 years of age; range, 60–180/site), took place immediately after school (about 3 PM), and lasted approximately 3 hours (until about 6 PM). All children arrived at the same time and were allowed to leave the ASP any time in the company of a parent or guardian. All ASPs had a similar schedule, each beginning with a snack followed by homework, enrichment, and physical activity. Each ASP purchased its snacks individually. None of the ASPs was receiving federal reimbursement for snacks or had policies in place specifying the nutritional content of the snacks served. The University of South Carolina Institutional Review Board approved all methods. Approval by the institutional review board included not having any child assent or parental consent, or consent with the grocers.

Intervention

The goal of the policy-level intervention was to identify strategies that would allow for the purchase of snacks that meet the Healthy Eating Standards defined by the National After-school Alliance and endorsed by the YMCA. To achieve the Healthy Eating Standards, in fall, 2011, leaders within the organization (business managers, site directors, child care directors, and program leaders) convened 4 meetings to identify potential strategies to achieve the nutrition goals outlined in the Healthy Eating Standards, while also being cognizant of the costs associated with purchasing fruits and vegetables to serve on a daily basis. The Healthy Eating Standards were used to guide all snack purchasing decisions implemented at the beginning of January, 2012. Although the standards call for serving a fruit or vegetable 5 d/wk, the ASPs determined that by the end of spring, 2012, they would set a goal of serving a minimum of 3 fruits

or vegetables/wk, with the intent of reaching 5 servings/wk by the end of the second year (spring, 2013).

The primary concern for the ASPs when establishing nutrition policies for their snacks was the cost associated with serving fruits and vegetables on a daily basis. Across the 2-year intervention, the 4 ASPs allocated \$0.34/child/snack/d to purchase snacks. To address this concern, the ASPs and university staff approached a local grocery store chain about a partnership to provide nutritious snacks to ASPs. The grocers were presented with the Healthy Eating Standards and concerns regarding price barriers to serving the recommended items. The grocer provided a discounted pricing structure (cost plus) to allow the ASPs to purchase items recommended by the Healthy Eating Standards while maintaining current allocated snack expenses. The partnership was based on a systems framework conceptual model for translating policy into practice in ASPs.¹⁴ A key feature of the systems framework¹⁴ is the identification of outside organizations with expertise and resources that can be leveraged to build the capacity of ASPs to meet policy goals. The principles underlying this partnership were to establish a network of local food sellers that (1) can be easily accessed by ASPs dispersed geographically across 2 counties (convenient to access based on proximity for ASPs to grocery stores), where ASPs can purchase snacks that (2) conform to the established Healthy Eating Standards and (3) result in either maintaining or reducing current snack expenditures.

As part of the community partnership, the ASPs in conjunction with university personnel developed a snack order form that included only items that met the Healthy Eating Standards and monthly menus that included a fruit or vegetable every day. The order form served as a way to ensure that only items that conformed to the standards were available for purchase, whereas the monthly menu provided the ASPs with intentional planning of the daily snack offering. During the intervention, ASP site leaders ordered snacks every 1–2 weeks and placed their orders on Wednesday before a Monday pickup at the closest grocery store.

The ASP leaders recorded the types of foods and beverages served as snack and verified them via unannounced site visits and receipts by research staff. Across each measurement occasion (spring, 2011 to spring, 2013), program leaders recorded the daily snack offerings for each week (Monday through Friday) and saved any snack waste (eg, wrappers, peels) in a plastic sealable bag. On Fridays, a trained research staffer would retrieve snack information and waste. Unannounced weekly site visits to each ASP during snack time were made to ensure the accuracy of the reported snack offerings. A total of 107 unannounced visits were conducted across the 4 ASPs. Snack information provided by the ASP leaders and from the direct observation during unannounced site visits were confirmed from purchasing receipts provided by the ASPs to the research staff. No evidence of inaccurate reporting was detected. Snack information was collected for 9 weeks each during spring/fall, 2011, and for 7 weeks each during spring/fall, 2012, and spring, 2013. Food and beverage items served as snacks were classified according to existing categories for snacks and included beverages^{2,4} and are defined in Table 1.

The costs of snacks purchased from the grocery store partner were determined via receipts provided by the ASPs. In addition, costs of the same snacks from a bulk warehouse club and a large food service vendor were collected. This was done to compare pricing from the grocery store partner in relation to purchasing the same snacks, had the ASPs continued to buy snacks from the bulk warehouse (location of snack purchases before partnership) or had they contracted with a food service vendor (consistent with other ASPs).

The researchers collected consumption of snacks using a modified direct observation protocol.¹⁵ During snack, children sat in groups of ≥ 3 children. At each unannounced site visit, trained research staff randomly selected a group of children. Within this group, no more than 5 children were randomly selected and observed for the entire duration of the snack time (approximately 15 minutes). During this time, a single observer recorded what the children were served

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