

## Children Set the Pace for Family Activity and Healthy Eating

### Family Impacts from Youth Participation in a Before-School Physical Activity Program

Research Snapshot, February 2017

#### Overview

This research brief summarizes a study of the impact of a before-school physical activity program, Build Our Kids' Success (BOKS), on the families of child participants and the association of participation with change in family attitude and behaviors towards physical activity participation and healthy eating. The findings are based on analysis of parent interviews and survey data. Findings suggest that while the degree to which engagement with families' by the program is limited and may vary, the child's participation in the program influences changes in families' attitudes and behaviors towards physical activity and healthy eating. Before-school physical activity programs may offer a promising model for how school health professionals can increase child physical activity and healthy eating as well as promote health and wellness within families through the child's participation. Research was conducted from October 2014 through May 2015.

#### Background

BOKS (Build Our Kid's Success) is a before-school physical activity program, sponsored by the Reebok Foundation, which began operating in the Natick Public Schools in Natick, Massachusetts during the 2009–2010 school year.<sup>1</sup> The program expanded to include all five Natick elementary schools the following year and continued to expand to other communities in Massachusetts, New York, Washington, DC, and Indianapolis, Indiana. BOKS programming is now offered in over 2,200 schools worldwide. The program aims to provide children with an opportunity to be physically active before school so that they are more focused when they enter the classroom and increase their non-sedentary time during the school day. BOKS also strives to influence how children incorporate principles of healthy nutrition and wellness into their daily lives.



BOKS provides a physical activity curriculum for free via download and offers free coaching and training both virtually and onsite at their central office in Canton, MA. The BOKS online Trainer Hub contains free tools and resources needed to help administer the BOKS program, including outreach materials, the full curriculum, and assessment tools. The BOKS curriculum, tools, and training are offered free of charge to participating schools through funding support from the Reebok Foundation and other funding partners. Parent volunteers serve as key facilitators of BOKS programming. Some programs operate under the supervision of a paid physical activity specialist/physical education teacher working in partnership with parent volunteers, however this is not mandatory.

<sup>1</sup> The pilot program was implemented at Memorial Elementary School in 2009-2010 (Natick, MA).

## Background, continued

*The typical BOKS program experience is a 40-minute before-school session that runs for 12 weeks, 2 to 3 mornings per week. Each program includes the following components:*

- Free play after drop-off by parents
- Group meeting and warm-up activity
- Running related activity
- Skill of the week (functional movements such as push-ups, sit-ups, squats)
- Interactive game
- Cool down and BOKS Bit (nutrition knowledge activity)



## Why Physical Activity During the Non-Classroom Hours is Important

Physical activity among children and youth has decreased markedly over the past few decades and among other factors, has led to obesity as a significant health issue for today's young people (Bassett, John, Conger, Fitzhugh, & Coe, 2015; WHO, 2016). In the United States, the percentage of children who are obese has more than tripled since 1970 (Ogden et al., 2014). Most recently Centers for Disease Control (CDC) data indicate a reduction in obesity rates for children ages 2-5 (Ogden et al., 2014), but overall prevalence for youth ages 2-19 remains stable at 17 percent (May et al., 2013; Ogden et al., 2015).

Significant disparities in obesity rates exist for particular groups such as Black and Hispanic youth (Cheung, Cunningham, Naryan, & Kramer, 2016; May, Freedman, Sherry, & Blanck, 2013). The impacts of obesity in childhood are both physiological and psychosocial, including associations with poor health and quality of life, pre-diabetes, bone and joint problems, internalizing disorders, altered pre-pubertal hormones, poor school performance, and risk factors for earlier onset of disease in adulthood (CDC, 2015).

Participation in physical activity during the school time hours is clearly part of the solution, although few children are reaching the minimum recommendation of 60 minutes per day (CDC, 2015b; USDHHS, 2008) through the typical components of their school day. Thus, combatting child obesity and increasing physical activity for children and youth during the non-classroom hours are critical tasks for before-school and afterschool professionals, programs, and youth workers serving community-based organizations.

## Connecting Families and Children

Lindsay et al. (2006) and other research point to the role parents play in promoting children's physical activity especially around enjoyment and self-efficacy (Ling, Robbins, McCarthy, & Speck, 2015). Much is known about the strong adult-child directional influence and that parents play a crucial role in modeling and providing healthy food and opportunities for physical activity (Frerichs, Araz, & Huang, 2013; Lindsay et al., 2006; van der Horst et al, 2007), but less is known about child-adult transmission and effects that a child's participation in a physical activity program may have on their parents, which then might further enhance healthy living for the child. The impact such initiatives can have on family attitudes and behaviors about physical activity and healthy eating is less clear. Expanding our understanding of the ways in which a child's experience of a physical activity and healthy eating intervention can impact family attitudes and behaviors is helpful for developing programs and approaches that positively influence both children's and families' healthy behaviors.

## Study Methods

Study participants were parents of children participating in BOKS programs in four Indianapolis public schools (K-8) and were recruited in September 2014 through flyers and email sent home from school through the BOKS facilitators and school administrators. Forty-nine parents participated in an interview with a researcher and 29 parents responded by electronic or paper survey. The demographic profile of responding parents was: 49 percent Black, 25 percent Hispanic, 21 percent white, 4.5 percent mixed race, and 0.5 percent Asian. All parents who responded to the invitation and returned an enrollment form were admitted to the study and invited to interview with a member of the research team who would be onsite at the program. Interviews were conducted in English or Spanish, lasted about 45 minutes, and were digitally recorded. A survey was made available to all parents not able to interview using SurveyMonkey (an electronic survey program) or paper copy using the program's email contact list. Interview and survey results reveal important trends about how families' perspectives on physical activity, nutrition, and healthy eating may have changed during the time that their children participated in the BOKS program.



## Findings

When parents were asked to consider their family's current physical activity level since their child began participating in BOKS, 54 percent of parents indicated that they are somewhat more and 13 percent indicated much more physically active. One third of parents reported that they engage in the same amount of activity. Parents were asked to consider the ways in which their family's physical activity behaviors have changed. Fifty-nine percent (59 percent) of parents reported that they are less sedentary. Twenty-eight percent (28 percent) of parents also reported that they engage in a greater variety of activities. Finally, 39 percent of parents reported increases in their family's level of interest in physical activity and almost 30 percent expressed an increased awareness of the need to exercise.



When asked to report any changes to their family's attitude and behavior regarding nutrition and healthy eating, parents reported changes such as eating more fruits and vegetables (41 percent), eating out less often (33 percent), eating together as a family more often (30 percent), and eating less refined, processed, or high fat foods (24 percent).

Parents reported many examples of children taking initiative to introduce new physical activities to the family that families could then engage in together such as bike rides, visiting the park, and walking. One parent explained:

“The three of us that are eligible for membership all go [to the gym]. We work out as a family. We're also getting outside, getting the fresh air, doing more physical activity such as walking or playing basketball with the children. In terms of healthy eating ... now we have some health goals that we've actually set in terms of weight loss and in terms of wanting to limit the amount of unhealthy foods that we have, our eating habits have changed. So we are now eating a lot more fruits and vegetables ... we're not eating as much sweets. So it's really changed our diet as well because we know that we have to have a healthier diet in order to be able to meet our fitness goals.”

## Findings, continued

During interviews parents also reported that BOKS has had a positive influence on their children's eating patterns and food choices. Parents explained that children will bring home ideas from the nutrition curriculum and talk with their parents about what types of food are healthier. While most parents reported that they were not aware of the specific nutrition curriculum (BOKS Bits) as part of the BOKS program, they did report seeing changes in their children's food selection. One parent explained how her children are more involved in meal planning at home, "Now they actually put thought into it, like in requesting a certain vegetable." Another parent commented:



"I think it's more about them taking the initiative and wanting to be healthier. To be honest with you, they've impacted us more than we have impacted them. Now the fourteen-year-old has a major role in that he'll say, 'Well Mom, I want more vegetables,' or 'Mom, can we get these fruits or can we add this.' That has really helped us. Every weekend especially on Sundays he'll ask us, 'Okay, so what time are we going to the gym?' Well, even if I was debating whether or not I was going to go, now we are definitely going to go. They are the ones taking the role and encouraging us to be a healthier family."

While many parents described how participation in the BOKS program has impacted their child's exercise and nutrition, some parents did not report any noticeable impact on the family. While these parents typically were aware of their child's participation and saw the benefits for them, they were unclear if the whole family had been impacted as related to activity patterns or eating habits.

## Conclusion

The interview and survey data suggest that there are family-level benefits to children's participation in before-school physical activity programs such as BOKS. The findings indicate that a child's participation in the program can influence the attitudes and behaviors of her/his family as well as reinforce positive messages about health, fitness, and nutrition that parents may already be promoting. BOKS introduces children to new kinds of exercises and promotes an awareness of the choices they can make about healthy activity and nutrition. The child's experience can catalyze her/his family to exercise and be more active together, especially when there are clear pathways for engagement, such as participation in a gym or walking together. **Increased engagement in physical activity and healthy eating is activated through the child and her/his behaviors and attitudes, not through the program itself.**

Findings indicate the value of implementing an exercise and nutrition curriculum that can be delivered as part of formal in-school time or less structured out-of-school time hours that teaches a variety of new physical activity skills, reinforces healthy habits, and emphasizes the vocabulary, language, and practices of wellbeing.

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Georgia Hall, Ph.D.  
National Institute on Out-of-School Time  
Wellesley Centers for Women, Wellesley College  
781.283.2530  
ghall@wellesley.edu  
niost.org

Brooke Rosenbauer  
Manager of Strategy & Impact, Social Purpose  
BOKS, Reebok International  
781.401.7986  
brooke.rosenbauer@bokskids.org  
bokskids.org