Be Active Kids®

Goals

The goal of Be Active Kids (BAK) is to give young children the tools they need to develop positive physical activity and nutrition habits.[i]

Be Active Kids Snapshot

- **EC Profile Indicator:** H60 - Percent of children who are at a healthy weight
- **Clearinghouse Rating:** None
- **Research supports** use with children birth to 5 years of age
- **Related Smart Start outcomes:**
  - Increase in **child** practice of healthy behaviors
  - Increase in **provider** practice of healthy behaviors
- **Purveyor training required**: Yes
- **Staff qualifications:** Smart Start funded Technical Assistance staff must meet TA Practitioner Qualifications
- **Frequency:** Integrated daily into child care activities
- **Suggested Assessments:** GO NAP SACC
- **Implementation Guidance:** http://www.beactivekids.org/beactive-at-school-childcare

Program Features

Be Active Kids is a program developed by health professionals to educate young children about healthy options for physical activities, eating habits, and food safety. Designed for use in any child care classroom setting, the Be Active Kids program consists of a developmentally appropriate curriculum kit of educational materials, interactive games, and hands-on lesson plans to help engage children in learning about healthy lifestyles. Childcare providers attend the 3 hour Be Active Kids training session. Once trained, providers begin implementing the program to integrate learning and movement in the classroom.

Be Active Kids also offers several training modules to assist in the continuing education of early childhood professionals. The training modules vary in length from one to five hours. Be Active Kids trainings relate to the following NC Division of Child Development topic areas: 1) planning a safe, healthy learning environment; 2) children's physical and intellectual development; 3) child growth development; and 4) productive relationships with families.

Partnerships that are implementing or considering implementing Be Active Kids program as a train-the-trainer model may want to consider the following:

1. Training consists of a 4-hour session for trainers on how to effectively teach and implement the Be Active Kids curriculum.
2. Trainers providing technical assistance for child care providers in addition to curriculum training on Be Active Kids must meet Smart Start TA Practitioner Qualifications.

For more information regarding Be Active Kids use this link: http://beactivekids.org

Target Audience

Early care and education professionals who work with infants, toddlers, twos and/or preschoolers

Documented Outcomes

	Type of Study	Child Care Provider		Provider- or Parent-Reported Child Outcomes			Child Outcomes	
		Change in provider attitudes about physical activity and healthy eating*	Change in provider practices**	Child improved knowledge about healthy eating and physical activity***	Children increase physical activity***	Children improve healthy eating habits***	Children can recognize healthy foods***	Children can recognize healthy physical activity***
Smith et.al. (2007)[ii]	Non-experimental with comparison groups	✓		✓	✓		✓	✓
Dunn et.al. (2001)[iii]	Non-experimental with comparison groups	✓		✓	✓	✓	✓	✓
DeMarco et.al. (2014)[iv]	Non-experimental		✓		✓			

This table contains outcomes found to be associated with the program or approach. Individual studies may contain additional outcomes that were tested and not found to be associated with the program or approach.

*Aligned with Smart Start outcome: *Increase in the provider practice of healthy behaviors*

**Aligned with Smart Start outcome: *Increase in program quality*

***Aligned with Smart Start outcome: *Increase in children's practice of healthy behaviors*

Research Evidence for Be Active Kids

- The program is aligned with changes in provider knowledge, attitudes, and behaviors related to nutrition, healthy foods, and activities.
- Parents and children also demonstrate improvements in knowledge and behaviors after exposure to program content.

Review of Experimental or Quasi-Experimental Studies

None

Review of Descriptive Studies

Citation	**Smith, M., MacDougall, J. M., Sutherland, L., Kelsey, K., & Farel, A. (2007). Be Active Kids evaluation report. Blue Cross Blue Shield of North Carolina: Durham, NC.**
Population and Sample	The study took place in North Carolina over a two-year period and included data from 67 trainers (23 of whom participated in follow-up), 168 child care providers who completed both pre- and post-training surveys (56 of whom completed a 10-week follow-up survey), and 98 child care providers who did not participate in training (69 of whom completed a 10-week follow-up survey) and parents and children from 11 centers (18 classrooms) that participated in the program and 11 comparison centers (19 classrooms) that did not participate in the program. Baseline and follow-up data were collected from 110 program parents and children and from 97 comparison group parents and children.
Methodology	Non-experimental
Purpose	The study was an evaluation of the Be Active Kids program with a focus on (1) measuring program trainer knowledge and attitudes about the program and its content; (2) measuring program trainer self-efficacy in working with and teaching child care providers about the program; (3) assessing child care provider knowledge, attitudes, and behavior related to program content (nutrition and healthy eating, physical activity, and food safety); (4) child care provider self-efficacy related to program implementation as well as barriers and benefits associated with the program; (5) assessing the impact of the program on four- and five-year old children and their parents, in areas related to program content.
Measures & Assessments	• Training surveys • Child care provider surveys • Parent surveys • Child interviews
Study Implementation	• There was a one-day "train-the-trainer" event attended by 68 trainers from 36 North Carolina counties. Of these 68 participants, 67 trainers completed pre- and post-surveys. • The trainers who attended the "train-the-trainer" event then were to train child care providers; 23 trainers participated in a follow-up survey after completing their first provider training. • A total of 309 child care providers received training in the program. Of these, 168 providers completed pre- and post-training surveys. Of these, 56 providers completed a 10-week follow-up survey. • A comparison group of 98 providers (69 of whom completed the 10-week follow-up survey) also participated in data collection. • Children (and their parents) enrolled in 11 program centers (18 classrooms, n=110 children) and 11 comparison centers (19 classrooms; n=97 children) participated in study surveys and interviews.
Staff Qualifications	• Not addressed
Key Findings	Trainers • The results demonstrated that overall, the train-the-trainer model is effective. The train-the-trainer session was well-received by participants. • On the pre- and post-surveys conducted at the time of training, there were significant gains on measures of trainer knowledge regarding program content (all at p<.001). There also were significant gains on measures of knowledge regarding nutrition and physical activity in preschool

children (p<.001). Overall training knowledge increased from an average 8.63 to 10.24 (out of a total of 11 possible points; p<.001).

- Trainers also demonstrated improvements in attitude on two topics: (a) importance of nutrition for reducing the risk of chronic disease in childhood and (b) importance of nutrition for reducing the risk of chronic disease in adulthood, both significant at p<.001. There also were improvements in trainer beliefs that physical activity is related to improved adult health, significant at p<.01.
- There were not significant increases in trainer attitudes regarding the importance of physical activity for child health.
- There were improvements in trainer confidence regarding (a) overall teaching skills (significant at p<.01); (b) ability to teach about nutrition (significant at p<.001) and physical activity and food safety (significant at p<.01).
- Many of the improvements noted at the time of training were maintained at the time of follow-up, after they had held their first provider training.

Child Care Providers

- After being trained on the curriculum, BAK providers' scores around knowledge, self-efficacy, and attitude showed significant improvements (p values ranging from .01 to .001). No significant improvements were shown for comparison providers for the same variables.
- There were improvements in BAK attitudes regarding food safety (p<.001) with no change reported in the comparison group of child care providers.
- At the time of the 10-week follow-up survey, BAK providers and comparison group providers differed on (a) whether they had ideas about how to teach nutrition (93% versus 77%, respectively; (b) physical activity (96% versus 90%); and (c) food safety (93% versus 65%).
- BAK providers reported that concerns about barriers or challenges to teaching children about program content reduced over time.

Parents and Children

- At the time of the 10-week follow-up survey, program parents significantly increased knowledge on several items related to program content: (a) minimum amount of time that four and five year olds should spend being physically active every day; (b) the MyPyramid Food Guidance System as a replacement for the Food Guide Pyramid; and (c) the use of the MyPyramid Food Guidance System to guide calorie and nutrient intake (all significant at p<.05). Comparison group parents are reported a significant improvement on the item related to the use of the MyPyramid Food Guidance System to guide calorie and nutrient intake, p<.05. Comparison group parents reported a significant decrease in the number of parents who correctly answered questions related to the minimum amount of time that four and five year olds should spend being physically active every day (p<.05).
- Parents reported some improvements in attitudes. Program and comparison parents reported a significant increase in agreement with the item "Teaching preschool children about physical activity will lead to more physical activity in their daily lives", p<.05. Comparison group parents also reported increased agreement with the item "Teaching preschool students about food safety will help them to avoid getting sick", p<.05.
- There were no significant improvements for BAK or comparison parents with respect to parent diet or level of physical activity or television behaviors. Among comparison parents there was a significant decrease in the number of parents who reported eating three or more servings of fruit per day, p<05.

Children

- At the time of the 10-week follow-up, there were no significant differences among program or comparison group children in their ability to identify foods correctly or choose healthy food options.
- Program children significantly improved overall correct choices, increasing the average score from 8.65 to 9.22 (out of 10; p<.001). Program children significantly improved their ability to identify healthy foods, increasing the average score from 3.1 to 3.5 (out of 5, <.05). Comparison group children demonstrated decreases in food identification (p<.001) but did demonstrate significant improvement in ability to place the correct food in the correct category on MyPyramid (p<.001).
- Program children exhibited significant differences in comparison to comparison group children in their ability to correctly identify healthy activities (with an increase in mean score from 1.94 to 2.22, out of 3, p<.05). Program children did not significantly improve their correct answers to food safety questions.
- There was a significant improvement (p<.05) in the number of program children who consumed skim or low-fat milk, and no improvement among comparison children. There was also a significant increase in the number of program and comparison children who had 3 or more

	servings of vegetables. There was a significant increase in the number of comparison children who had no sugar-sweetened beverages daily. • For children's physical activity, there were no significant changes in physical activity among program or comparison children, but there was a significant improvement ($p<.05$) for program children with respect to television viewing. • Program children reported an increase in sedentary indoor and active outdoor activities. Among comparison group children, there was no change in the average amount of sedentary indoor activities while the report of active outdoor activities decreased. • Program and comparison children showed no significant differences for answering questions related to handwashing.

Citation	**Dunn, C., Thomas, C., Smith, C., & Pegram, L. (2001). Be Active Kids: A nutrition and physical activity education program for four- and five-year-olds. The Forum for Family and Consumer Issues, 6(3).**
Population and Sample	More than 1500 child care providers participated in program training over a three-year period. A survey was conducted 8 weeks after the training; 72 providers responded (response rate of 59%). As regards child outcomes, there were 100 children in five child care centers incorporated into the treatment group. The children were an average 4.4 years old. Fifty-percent of the children were African-American and 40% were Caucasian. Fifty-five percent of children were female. There were 54 children, in three centers, that were incorporated into the comparison group. The children averaged 4.5 years old. Nineteen percent of the children were African-American and 74% were Caucasian. Fifty percent of the children were female.
Methodology	Non-experimental
Purpose	The study was an evaluation of the Be Active Kids training and curriculum in practice at child care sites. The provider survey targeted the extent to which providers used the program curriculum in their classrooms and whether or not there were plans for future use of materials.
Measures & Assessments	• Provider survey • Child interview

Study Implementation	• The evaluation studied program effectiveness in three phases:
	  ○ In Phase 1, child care providers who participated in local trainings were asked to complete training evaluations.
	  ○ In Phase 2, child care providers who participated in local trainings received a follow-up survey, 8 weeks following their training.
	  ○ In Phase 3, children in both treatment and comparison groups received a 15-minute interview, conducted by a study team member considered an expert in early childhood education.

Staff Qualifications	• Not addressed
Key Findings	Provider Survey Responses • Ninety-percent of providers reported that Be Active Kids increased child knowledge about healthy eating • Eighty-five percent of providers reported that Be Active Kids increased child knowledge about physical activity • Ninety-percent of providers reported that Be Active Kids was associated with increased physical activity in children • Seventy-six percent of providers reported that Be Active Kids was associated with healthier eating in children • Ninety-six percent of providers reported that Be Active Kids was associated with a positive change in provider attitudes about physical activity and healthy eating Child Interviews • Treatment group children could recognize significantly more fruits and vegetables than comparison group children ($p < .05$) • Treatment group children were significantly more likely to identify at least three healthy foods than comparison group children ($p < .05$) • Treatment group children were significantly different from comparison group children in ability to identify healthy eating and physical activity as healthy behaviors ($p < .05$) • Treatment group children were significantly different from comparison group children in ability to understand and demonstrate physical activity ($p < .05$)

Citation	**De Marco, A. C., Zeisel, S., & Odom, S. L. (2014). An evaluation of a program to increase physical activity for young children in child care. Early Education and Development, 0, pp. 1-21.**
Population and Sample	The study included a total of six classrooms in three child care centers. Altogether, the classroom served children ages 1-2 years (toddlers), 2-3 years (twos), and 4-5 years (preschool).
Methodology	Multiple baseline single case design
Purpose	This study is an evaluation of Be Active Kids, with a focus on three questions: 1. What is the level of light and moderate/vigorous physical activity at baseline? 2. Does the Be Active Kids intervention increase the amount of light and moderate/ vigorous physical activity and decrease the amount of sedentary physical activity? 3. Does the Be Active Kids intervention increase the amount of teacher-directed physical activity?
Measures & Assessments	• PlayCheck Observation Procedure, adapted from the Observational System for Recording Physical Activity in Children–Preschool (OSRAC-P) • Center and classroom surveys
Study Implementation	• The Be Active Kids (BAK) program materials and a two-hour teacher (lead and assistant) training were provided by project investigators. The training was provided after five initial observations were conducted to gather baseline data. • Teachers were asked to incorporate activities into their lesson plans and to include an indoor and an outdoor lesson on days the researchers observed their classrooms. They were also asked to record the activities in their lesson plans. • Evaluation data were collected through standardized classroom observations and surveys. Each classroom was observed using the PlayCheck observation system five times prior to the intervention (baseline) and five times after the intervention (treatment). Start times at each of three centers were staggered by several weeks. • Three observers were trained by watching videos of children's physical activity in child care settings and discussing codes to come to a common understanding of the operationalized definitions of each activity level (moderate/vigorous, light, and sedentary). • 10 children were selected for observation if the class contained more than 10 children. Numbered vest were used to help observers identify children. • Center directors completed a short demographic survey about the center, asking about the school schedule, total number of children and number of children per age group; race/ethnicity of children; number of children with a disability; and centers' star ratings, which is an indicator of child care quality in NC. • Lead teachers completed a demographic survey about their classrooms, asking about the age group cared for; number of children; number of adults; gender, race/ethnicity, disability status of the children; lead teacher's educational attainment, age, race/ethnicity, number of years providing child care, tenure at the current center, and experience with physical activity programs for young children. • Fidelity of implementation was monitored through lesson plan reviews, which were to incorporate children's physical activities
Staff Qualifications	• Not addressed
Key Findings	• Moderate or vigorous physical activity increased from 12.2% of observation periods to 16.6% of observation periods. • Light physical activity increased from 61.6% to 64.3% of observation periods. • Sedentary activity decreased from 25.6% to 18.9% of observation periods. • In comparing teacher-directed and non-teacher directed activities, 94% of observations related to teacher-directed physical activity showed improvements over time, compared to 39% of activities that were not teacher-directed. Effect sizes related to teacher-directed activities were medium to large, especially when related to moderate or vigorous physical activity and sedentary activity. • Overall, from pre-intervention to post-intervention four of the six classrooms saw increased moderate/vigorous physical activity, light physical activity increased in three classrooms, and sedentary physical activity decreased in five. The biggest increases in physical activity were found during teacher-directed activity. • In teacher-directed activities moderate/vigorous and light activity increased in five and six classrooms, respectively.

End Notes

[i] Be Active Kids. Be Active Kids. (n.d.) [Website]. Available from: http://beactivekids.org/bak/Front/Default.aspx.

[ii] Smith, M., MacDougall, J. M., Sutherland, L., Kelsey, K., & Farel, A. (2007). Be Active Kids evaluation report. Blue Cross Blue Shield of North Carolina: Durham, NC.

[iii] Dunn, C., Thomas, C., Smith, C., & Pegram, L. (2001). Be Active Kids: A nutrition and physical activity education program for four-and five-year-olds. Forum for Family and Consumer Issues, 6(3).

[iv] De Marco, A. C., Zeisel, S., & Odom, S. L. (2014). An evaluation of a program to increase physical activity for young children in child care. Early Education and Development, 0, pp. 1-21.

Note: Research summaries could include verbiage directly reproduced from the research literature. Quotes and italics may be used to show a direct quote but not always.

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