Healthy Kids, Healthy Futures: A Multilevel Approach to Prevent Childhood Obesity

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Statement of the Problem

The increase in overweight and obesity among children is concerning. In the U.S. nearly 15% of low income, preschool age children are obese. In Boston, nearly half of Head Start children are overweight or obese. It is important to promote health in young children because obese children and adolescents are at risk to become obese adults. The obesity problem is complex and multifaceted. Contributors include health behaviors such as eating and physical activity. Children’s health behaviors are shaped at home, at school, and in the community. To date there have been many prevention efforts among school-aged children. In contrast, there have been far fewer efforts for younger children. Prevention for young children should be comprehensive, targeting multiple environments, health behaviors and caregivers.

Healthy Kids, Healthy Futures (HKHF)

HKHF is an innovative, community-based early childhood initiative aimed to prevent childhood obesity by supporting healthy environments where preschool children live, learn and play (i.e., home, school, and community). In 2008 an inter-institutional partnership was formed to create greater opportunities for wellness among Boston families and to address disparities in the rates of childhood obesity by targeting neighborhoods that bear a disproportionate burden of obesity among young children. The project’s mission is to reduce obesity rates in preschool children at 4 Head Start programs in Boston, MA.

Program Activities & Evaluation for Caregivers

- Includes 4, 90 minute bi-lingual workshop sessions
- MKH objectives
  - Nutrition and Physical Activity Self-Assessment
  - Nutrition Education & Policies
  - Exercise & Physical Activity
  - Health and Wellness for Staff

Preschool Component:

- Module 1: Nutrition Policy (N = 1); Active Play (N = 1); PA Education (N = 2); PA policy (N = 2).
- Module 2: Nutrition for Young Children
- Module 3: Physical Activity for Young Children
- Module 4: Personal Health and Wellness for Staff
- Module 5: Working with Families to Promote Healthy Weight Behaviors

Goals:

- Goal 1: To improve the capacity of Head Start providers to prevent childhood obesity among pre-school age children and their families.
- Goal 2: To increase opportunities for caregivers to build skills that support informed and healthy eating and physical activity behaviors.
- Goal 3: To increase opportunities for preschool children to be physically active with their families in safe, accessible and age-appropriate settings.

Methods

Participants & Setting: Participants included Head Start staff (N=47) and family caregivers (N=57) of preschool children at 4 Head Start programs in Boston, MA.

Program Activities & Evaluation for Caregivers: The NIH’s We Can! (Ways to Enhance Children’s Activity and Nutrition) curriculum was used to build skills that support parents in making informed and healthy food choices, increasing physical activity, and reducing recreational screen time for their families at home. We Can!:

- Focuses on 3 behaviors:
  - (1) improved food choices;
  - (2) increased physical activity (PA); and
  - (3) reduced screen time (TV).

- Includes 4, 90 minute bi-lingual workshop sessions
  - Session 1: Overview & PA: Eating Healthy & Being Active is Important Health Issue
  - Session 2: Energy Balance
  - Session 3: Strategies for reducing Energy In
  - Session 4: Strategies for increasing Energy Out

- The We Can! questionnaire was administered at pre and post-test to parents (N = 26; 48%). Items assessed behavioral intentions: Nutrition (n = 8); PA (n = 5); TV (n = 5) by asking:
  - Thinking about you and your family, how likely are you to do the following in the next 30 days?
  - Response scale to this question is: 1 = very unlikely to 5 = very likely

- Results:

- WE CAN!
  - Participants’ Demographics
    - 44% of participants were female
    - 78.4% Latino
    - 31.6% African American
    - 11.6% White
    - 5.6% American Indian/Alaska Native/Other
  - Compared with pre-test, at post-test participants’ reported they were more likely to do the following in the next 30 days:
    - Reduce high fat and sugar foods at home (p < 0.01)
    - Help children plan physical activities with friends (p < 0.01)
    - Switch to smaller portions (p < 0.05)
    - Talk with my family about healthy foods (p < 0.05)

- Nutrition and Physical Activity Self-Assessment (NAP SAC)

- All 4 Head Start program sites completed the NAP SAC self-assessment (Table 1).
- Following the self-assessment all 4 sites set goals and developed an action plan.
- Types of goals: Nutrition Education & Child Feeding Practices (N = 2); Healthy Eating & Nutrition Policy (N = 1); Active Play (N = 1); PA Education (N = 2); PA policy (N = 2).
- The HKHF project manager provided ongoing support and follow-up.

Results

General:

- HKHF is a multi-level, obesity prevention initiative designed specifically for preschoolers.
- HKHF uniquely combines interventions across 2 program components to target children where they live (home), learn (school), and play (community).
- In Year 1, all program components were fully implemented as planned.

Caregiver Component:

- There was initial evidence of intentions to change health behaviors among caregivers.
- However, the evaluation lacked a control group and the data were self-reported.

Preschool Component:

- Head Start programs limit unhealthy food choices and promote healthy food choices.
- Head Start staff encourage children to try new or less favorite foods, join children at the table for meals, consume the same foods/beverages as children, talk with children about trying/enjoying healthy foods frequently and are aware of fullness and hunger cues.
- The self-assessment component led directly to suggestions for menu changes across the programs to diversify the menu to be more culturally representative of the children who attend the programs.
- As a result the Children’s Food/Favorite Recipe Day Workgroup was formed and is currently piloting new recipes received from parents and staff. This component will be evaluated in the fall 2010.

Next Steps:

- HKHF will benefit from a more rigorous (controlled) evaluation to document its effects on children’s eating and physical activity behaviors and overweight/obesity rates across the participating Head Start programs.

Summary and Conclusions

We gratefully acknowledge the collaboration and continued support of our community partners and the Head Start staff and families who participate in HKHF.

Acknowledgments

Table 1. NAP SAC Self-Assessment

<table>
<thead>
<tr>
<th># of Program Sites (N = 4)</th>
<th>Limiting Unhealthy Food Choices</th>
<th>Healthy Eating &amp; Physical Activity Self-Assessment for Caregiver (NAP SAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Fried potatoes, high fat meats, &amp; sugary drinks offered &lt;1x/week, rarely or never</td>
<td>Reduce high fat and sugar foods at home (p &lt; 0.01)</td>
</tr>
<tr>
<td>3</td>
<td>Fried chicken/fish and salty snacks offered &lt;1x/week or never</td>
<td>Help children plan physical activities with friends (p &lt; 0.01)</td>
</tr>
<tr>
<td>2</td>
<td>Vegetables never/rarely prepared with fats, margarine or butter</td>
<td>Switch to smaller portions (p &lt; 0.05)</td>
</tr>
<tr>
<td>3</td>
<td>Vegetables (not French fries) are offered 1x/day; high-fiber, whole-grain foods are offered 2-4x/week; and beans and lean meats are offered 1-2x/week</td>
<td>Talk with my family about healthy foods (p &lt; 0.05)</td>
</tr>
<tr>
<td>2</td>
<td>Eating Behaviors-Staff &amp; Children</td>
<td>Nutrition Education &amp; Policies</td>
</tr>
<tr>
<td></td>
<td>Children are encouraged to try new or less favorite foods</td>
<td>Posts or books about healthy food are in every classroom/ common area</td>
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<tr>
<td></td>
<td>Staff join children at the table for meals and consume the same food/drinks as children</td>
<td>A written policy on nutrition is available and followed</td>
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<td></td>
<td>Staff talk informally with children about trying/enjoying healthy foods frequently</td>
<td>Nutrition training opportunities are provided to staff 1x/year</td>
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<td></td>
<td>Food is rarely/never used to encourage positive behavior</td>
<td>Nutrition education is taught using a standardized curriculum</td>
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<td></td>
<td>Children are asked all of the time if they are full before staff remove half-eaten meals if they are still hungry before staff serve more</td>
<td>Nutrition education opportunities are provided to parents 1x/year</td>
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<td>45-90 minutes of active playtime is provided to all children daily</td>
<td>Exercise &amp; Physical Activity</td>
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<tr>
<td></td>
<td>Staff often encourage children to be active and join students in play</td>
<td>Physical activity is written, available, and followed</td>
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<tr>
<td></td>
<td>TV and videos are used rarely or never</td>
<td>Children are rarely seated for &gt;30 minutes (excluding meal time)</td>
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<td></td>
<td>PE is provided to all children through a standardized curriculum</td>
<td>Outdoor, active play is provided to all children 1x/day</td>
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<td></td>
<td>Teacher-led physical activity is provided to all children &gt;2x/day</td>
<td>4x/week</td>
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<tr>
<td></td>
<td>Staff training opportunities in physical activity are provided &gt;2x/week</td>
<td>2x/week</td>
</tr>
<tr>
<td></td>
<td>Outsider space is available with plenty of open running space</td>
<td>A policy on physical activity is written, available, and followed</td>
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<tr>
<td></td>
<td>Indoor play space is available for running</td>
<td>2x/week</td>
</tr>
</tbody>
</table>

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