HolescherD_Role of Schools Communities in Promoting Healthy Weight_Promoting Healthy Weight Colloquium, The University of Tennessee, Knoxville

It Takes a Village: The Role of Schools and Communities in Promoting Healthy Weight in Children

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UTSPH

Today’s Talk

• Why target schools, childcare centers, and communities?
• Describe school-, childcare center- and community-based programs to promote healthy weight
  – CATCH
  – CATCH Kids’ Club
  – CATCH Early Childhood
  – Lunch is in the Bag
• What strategies can be used to engage communities in promoting healthy weight in schools & childcare centers?
Getting to Know You!

- How many of you are in a school district?
- How many of you work with school districts?
- How many of you are in or work with childcare centers?
- How many of you would like to work with school districts or childcare centers?

Child Obesity by the Numbers

- **10.4%**
  - Percent of 2-5 year olds that are obese (in the U.S.)
- **19.6%**
  - Percent of 6-11 year olds that are obese
- **14.5%**
  - Percent of 6-11 year olds that are very obese (97th percentile)
- **18.1%**
  - Percent of 12-19 year olds that are obese

**Source:** Ogden et al., 2010

Children in Texas Have High Rates of Obesity

**Obesity in 25th Percentile for BMI by Age/sex**

- **4th grade**: 2000-02 (26.6), 2004-05 (27.0), 2009-11 (27.2)
- **8th grade**: 2000-02 (25.5), 2004-05 (26.0), 2009-11 (26.2)
- **11th grade**: 2000-02 (24.6), 2004-05 (25.1), 2009-11 (25.3)

**Healthy People 2020 Goal: 14.0%**

**Source:** Hoelscher et al., 2004; Hoelscher et al., SPAN
Similar Genes, Different Environments

Toxic Environment

- Eating and exercise environments that contribute to overweight, including:
  - Availability and affordability of high fat/high carbohydrate food (fast food, soft drinks)
  - Large portion sizes
  - Marketing to children
  - Fewer family meals
  - TV/computers/video games
  - Safety issues
  - Decrease in physical education time

Source: Brownell, 1994

Why Target Schools?

- Schools reach a majority of students in the U.S. between the ages of 5 and 18
- Schools have mandates to teach about health
- Schools have facilities for food preparation and physical activity
- Education - Latin *educere* meaning "to lead out, to rear, to nourish, to raise."
  
  Miriam Webster Dictionary
Schools Influence Most Children in the US

- Number of children in schools/districts
  - Districts: from 1 (Hawaii) to 1276 (Texas)
  - Schools: from 244 (Delaware) to 9283 (California)
  - Students: CA >6.3 million, TX 4.75 million NCES/CCD, 2008-9
- Large workforce
  - 6% of workforce Bureau of Labor Statistics, 2005
- No Child Left Behind (NCLB)
  - Standardized testing
  - “What gets measured, gets done” — Tom Peters

“Schools have more influence on the lives of youth than any other social institution except the family, and provide a setting in which, friendship networks develop, socialization occurs and norms that govern behavior are developed and reinforced.”

Healthy People 2010
http://web.health.gov/healthypeople

What is CATCH?

A multi-component, school based coordinated health approach to help children adopt healthy dietary and physical activity behaviors.
To build an infrastructure of parents, teachers, school staff, and community partners to teach children and their families how to be healthy for a lifetime.

To involve parents and community members in CATCH by empowering them with the skills necessary to develop healthy school, community, and home environments.

CATCH Family & Community Initiative

- Reduced total fat and saturated fat content of school lunches.
- Increased MVPA during P.E. classes.
- Improved students’ self-reported eating and physical activity behaviors.
- Effects persisted over three years without continued intervention.
- Reduced prevalence of obesity in El Paso trial.


CATCH Results in Changes in Diet, PA & Obesity

CATCH & Community Programs Contributed to Decreases in Child Obesity in El Paso

4th Grade Prevalence of Obesity* by Health Service Region, SPAN, 2000-2002 to 2004-2005

*Obesity is > 95th Percentile for BMI by Age/Sex

Source: Hoelscher, et al., 2010
What Caused the Decrease in Obesity Among 4th Graders in Regions 9 & 10?

- Paso del Norte Health Foundation
  - CATCH initiative
  - 8 years
  - Resources, support
  - Qué Sabrosa Vida
  - Walk El Paso
- Legislation
- Other Policies
  - Texas Public School Nutrition Policy
- Media Campaign

Coordinated Approach To Child Health

Basic

Classroom Curriculum  Physical Education
School Food Service  Family Involvement

Coordinated Approach To Child Health

Basic Plus

CATCH Action Team
Classroom Curriculum  Physical Education
School Food Service  Family Involvement
Coordinated Approach To Child Health

Basic Plus Community

- CATCH Action Team
- Classroom Curriculum
- Physical Education
- School Food Service
- Family Involvement

CATCH Community School Actions (2007-2008)

- CATCH Community Café
  - Provide opportunities for students to have a taste of healthful foods
  - Implement school gardening program
  - Implement guided play during recess
  - Implement a physical activity break during class-time
  - Increase role modeling of PA by principal and school staff
  - Create a safe play space for children by opening the schoolyard after school and providing attendants to ensure children’s safety

Travis County Dell Elementary CATCH Percent Overweight (≥ 85th % BMI)

<table>
<thead>
<tr>
<th></th>
<th>All (n=35)</th>
<th>Basic (n=5)</th>
<th>Basic Plus (n=15)</th>
<th>Basic Plus Community (n=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring '07</td>
<td>45.6</td>
<td>32.4</td>
<td>45.8</td>
<td>46.5</td>
</tr>
<tr>
<td>Spring '08</td>
<td>40.3</td>
<td>29.3</td>
<td>44.5</td>
<td>40.5</td>
</tr>
</tbody>
</table>

n students = 1,300
Why Target Preschool-age Children?

- >60% of preschool age children in the U.S. attend some form of child care (i.e. preschool, day care center)
- Preschoolers in child care centers are spending a majority of their time at these centers in sedentary or light physical activity (only 3-5% of their time spent in MVPA) (Sharma et al. in press; Brown et al., 2009).
- Evidence-based guidelines for nutrition and physical activity are lacking and vary state-by-state (Kaphingst, 2009).

Challenges of Working within the Daycare/School Environment

- Health is not a priority
- Lack of trained teachers
- Lack of standards
- Time
- Resources
  - Teachers
  - Equipment
  - Materials

CATCH UP: Expanding CATCH to Preschool

- Coordinated Approach To Child Health – Underserved Populations (CATCH UP)
- Goal: to design, implement and pilot test the newly developed CATCH Early Childhood program among 3-5 year old children enrolled in the Harris County Department of Education Head Start and their parents.
CATCH Early Childhood program

- Classroom curriculum – 9 nutrition lesson plans with activities
- 10 gardening-based lessons
- Activity box – > 500 physical activities aimed at promoting total and MVPA per day while at school
- Parent tip-sheets – 9 parent-tip sheets

Pilot Results from CATCH UP

- Post-test parent and teacher focus groups showed high feasibility and acceptability of the program components.
- There was a significant increase in number of servings of fruits consumed post-test (p=0.003).
- There was an increase in number of servings of vegetables consumed. But this increase was not statistically significant.
- Increase in mean total minutes of activity post-test but not statistically significant.

Lunch is in the Bag

- **The Need:** Recent evidence suggests that sack lunches packed by parents for children to consume at child-care centers do not regularly meet the goal of one serving of fruit, vegetables, and whole grains.
- **Lunch Is In The Bag** is a child-care center-based nutrition education program targeted at parents of preschool-aged children to increase the number of servings of fruits, vegetables, and whole grains in sack lunches sent from home.
Lunch is in the Bag Program Components

Lunch is in the Bag increased servings of Whole Grains and Vegetables

<table>
<thead>
<tr>
<th>Servings of:</th>
<th>Intervention</th>
<th>Comparison</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Baseline (n = 240)</td>
<td>Follow-up (n = 231)</td>
</tr>
<tr>
<td></td>
<td>Mean ± SD</td>
<td>Mean ± SD</td>
</tr>
<tr>
<td>Fruit</td>
<td>1.89 ± 1.29</td>
<td>1.86 ± 1.17</td>
</tr>
<tr>
<td>Whole grains**</td>
<td>0.62 ± 0.99</td>
<td>1.15 ± 1.34</td>
</tr>
<tr>
<td>Vegetables**</td>
<td>0.42 ± 0.60</td>
<td>0.66 ± 0.94</td>
</tr>
</tbody>
</table>

**p<0.01


So what can we do to make programs more effective?
Engaging Communities....

...hosting a family or community walk to earn raffle tickets?

Engaging Communities....

...partnering with local agencies to provide parent cooking classes?
Community Partners

Coordinated Approach To Child Health

- Coordinating Coordinated School Health – a missing piece.
- The CATCH Coordination Toolkit with guides for:
  - CATCH Team
  - Principals/Administration
  - Teachers
  - PE Specialists
  - Parent Leaders
  - Child Nutrition Staff
  - Specialized/Support Staff

What’s in the Toolkit?

- Coordination Guide
  - One binder with everything; bound booklet to be used by CATCH Team & masters of everything else
- Component Folders
  - 6 folders with loose pages designed to distributed to school faculty & staff
- Resource CD
  - Electronic files of all the materials
Engaging Communities: CATCH Kick Off Week

- Developed in conjunction with Texas Obesity Awareness
  - Quick, fun, and easy coordinated activities to ‘kick’ the school year off to a healthy start
- Walk Across Texas
  - Texas AgriLife Extension

Nine Other Ways for Communities and Parents To Get Involved

- Child Health Collaborative
- School Wellness Policies/Committees
  - District or School level
- Safe Routes to School Programs
- PTA Healthy Lifestyles Chair
- Church Programs
- AgriLife Extension Programs
- YMCA/Boys & Girls Clubs
- Be Well Book Club
- Social Media/Smart Phones

Summary

- Implementation of a community-enhanced school program can be effective in reducing the prevalence of child overweight in low income student populations.
- Parents, schools and communities need to work together for a consistent message and outcome.
The test of the morality of a society is what it does for its children.

Dietrich Bonhoeffer

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- Website for CATCH:
  http://www.sph.uth.tmc.edu/catch/
- Website for SPAN survey:
  http://www.sph.uth.tmc.edu/DellHealthyLiving/default.asp?id=4063
- Dell Center Blog:
  http://msdcenter.blogspot.com

Selected Resources

- CATCH Texas
  http://www.sph.uth.tmc.edu/CATCH/

- Recommended Community Strategies to Prevent Childhood Obesity
  http://www.sph.uth.tmc.edu/programs/programs.html/r6801aj7.html

- PTA Healthy Lifestyles Chair Information
  http://www.pta.org/programs/healthy-lifestyles

- How To Create and Implement a Local Wellness Policy
  http://www.fns.usda.gov/tn/Healthy/wellnesspolicy_steps.html

- Action for Healthy Kids School Wellness Policy Tool
  http://www.actionforhealthkids.org/school-programs/our-programs/wellness-policy/

- Walk Across Texas program
  http://walkacrosstexas.tamu.edu/

- National Policy and Legal Analysis Network to Prevent Childhood Obesity (NPLAN)
  http://www.plannonline.org/
Dell Center Vision and Mission

**Vision** - Healthy Children in a Healthy World

**Mission** - To serve as a state, national and international leader in the promotion of healthy living.

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