The Food Environment in Elementary Schools

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Presenter Disclosures

Lindsey Turner

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose
Program Director:
Frank Chaloupka
Co-Investigators:
Lisa Powell
Sandy Slater
Jamie Chriqui
Leah Rimkus
Research Staff:
Steve Du Bois
Sarah Hagin
Anna Sandoval
Yo Mom... tell me you packed my lunch today...
The “Food and Fitness” Project

- Started with 2006-7 school year
- Collecting and coding wellness and other policies in a nationally-representative sample of 580 LEAs (school districts)
- Nationally representative sample of 1150 elementary schools within those districts
- 400 additional private schools
- Secondary schools (middle and high schools) surveyed by colleagues at U of M
The “Food and Fitness” Project

Wellness Policies
• Coded on a variety of topics, including nutrition education, physical education, competitive foods, etc.

Administrator Surveys
• Asks respondents to provide information on policies and practices regarding:
  • School food service (breakfast, lunch, competitive foods)
  • Classroom food/beverage consumption
  • Physical education, recess, sports
  • Alliance for a Healthier Generation guidelines
  • Vending contracts
The “Food and Fitness” Project

2007 Principal Surveys

$100 incentive payments; follow up via telephone, mail, email

837 mail-back surveys received (578 public schools, 259 private)

57.7% response rate (54.6% public schools; 66.2% private schools)

Fielding period: April to October 2007
The “Food and Fitness” Project

Sampling weights were adjusted to account for non-response

Results presented here are weighted to provide inference to the population of elementary schools in the U.S.
Where do students get lunch?

- Total
- Public
- Private
- Higher-Income (<33% free/reduced)
- Mid-Income (33 to 66% free/reduced)
- Lower-Income (>66% free/reduced)

- Other
- Bring Lunch
- School Lunch
Where do students get lunch?

- **Total**
- **Public**
- **Private**
- **Higher-Income (<=33% free/reduced)**
- **Mid-Income (33 to 66% free/reduced)**
- **Lower-Income (>66% free/reduced)

* $p < .01$
Where do students get lunch?

* $p < .01$
What commercial foods are offered at lunch?

![Bar chart showing the frequency of different food categories offered at lunch.]

- Traditional fast food: 1.4 days per week, M = 1.0, SD = 1.3
- Mexican fast food: 0.9 days per week
- Fried chicken: 1.7 days per week
- Sandwiches/subs: 2.4 days per week
- Pizza: 15.5 days per week
- Local, not fast food: 4.9 days per week

Days per week, M = 1.0, SD = 1.3
Where are students eating lunch?

- 60% in Dedicated Cafeteria
- 24% in Multi-Purpose Room
- 9% in Gymnasium
- 7% in Other

Other locations include: Dedicated Cafeteria, Multi-Purpose Room, Gymnasium, Other.
## Kitchen facilities

<table>
<thead>
<tr>
<th></th>
<th>Full service</th>
<th>Partial</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>77%</td>
<td>20%</td>
<td>3%</td>
</tr>
<tr>
<td>Private</td>
<td>70%</td>
<td>18%</td>
<td>12%</td>
</tr>
</tbody>
</table>
Percent of schools with various types of food/beverage advertising

- Soda, Candy, Fast Food
- Milk
- Fresh Fruit or Vegetables

- Cafeteria
- Elsewhere in school
- Anywhere here in school
How much time do students have to eat lunch?

- < 20 minutes: 2.5%
- 20 minutes to < 30 minutes: 30.4%
- 30 or more minutes: 67.1%
Timing of recess in relation to lunch

- **Lunch First**: 50%
- **Recess First**: 6%
- **No recess before/after lunch**: 5%
- **Varies**: 39%
Are schools providing nutrition information to students and parents regarding the foods that are available at school?

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>0-33% free lunch</th>
<th>&gt;33 to 66% free lunch</th>
<th>66% or more free lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>59</td>
<td>67.6</td>
<td>54.5</td>
<td>54.1</td>
</tr>
</tbody>
</table>

*P < .05
School Gardens and Farm to School Programs

<table>
<thead>
<tr>
<th></th>
<th>School Gardens</th>
<th>Farm to School</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>11.6</td>
<td>5</td>
</tr>
<tr>
<td>Higher Income</td>
<td>15.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Mid</td>
<td>9.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Lower</td>
<td>9.3</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Legend:
- School Gardens
- Farm to School
The Cupcake Police

You're com'n with me!
### “Cupcake bans”

<table>
<thead>
<tr>
<th>Policy</th>
<th>Yes, school-wide policy</th>
<th>Yes, in some classes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies limiting sugar-sweetened items (e.g., candy, cupcakes, cookies) from being brought in during snack-time</td>
<td>46.3%</td>
<td>22.6%</td>
<td>31.1%</td>
</tr>
<tr>
<td>Any policies limiting sugar-sweetened items (e.g., candy, cupcakes, cookies) at school parties</td>
<td>33.0%</td>
<td>17.2%</td>
<td>49.9%</td>
</tr>
</tbody>
</table>
Classroom practices involving candy

Teachers use food (e.g. candy) as a reward for good academic performance.

Teachers use food (e.g., candy) as a reward for good behavior.

Classroom lessons involve candy (i.e., mathematics using M&M candy).

Food coupons are used as an incentive for students (e.g., “Book-It” pizza party for reading).
## Classroom practices involving candy

<table>
<thead>
<tr>
<th></th>
<th>Yes, up to teachers</th>
<th>Yes, but discouraged</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candy as reward for good academic performance</td>
<td>31.9%</td>
<td>31.9%</td>
<td>36.7%</td>
</tr>
<tr>
<td>Candy as reward for good behavior</td>
<td>33.4%</td>
<td>31.2%</td>
<td>35.4%</td>
</tr>
<tr>
<td>Candy in classroom lessons</td>
<td>50.9%</td>
<td>13.0%</td>
<td>36.1%</td>
</tr>
<tr>
<td>Food coupons (e.g., Book-It)</td>
<td>64.9%</td>
<td>4.8%</td>
<td>30.3%</td>
</tr>
</tbody>
</table>
## Additional classroom practices

<table>
<thead>
<tr>
<th></th>
<th>Yes, up to teachers</th>
<th>Yes, but discouraged</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Students are allowed to keep water bottles at their desk</strong></td>
<td>92.2%</td>
<td>1.1%</td>
<td>6.7%</td>
</tr>
<tr>
<td><strong>Foods are regularly allowed in class (other than snack time or parties)</strong></td>
<td>17.2%</td>
<td>5.4%</td>
<td>77.4%</td>
</tr>
<tr>
<td><strong>Beverages other than water are regularly allowed in class (other than snack time or parties)</strong></td>
<td>4.6%</td>
<td>3.3%</td>
<td>92.1%</td>
</tr>
</tbody>
</table>
Encouraging news:

• Most schools provide students adequate time to eat lunch

• Very little advertising for junk food, and >2/3 of schools have milk and fruit/veg advertising

• Most schools allow students to keep water at their desks

• Most schools do not allow beverages or foods in class other than snacks/parties
Room for improvement:

- Few schools have policies limiting sugar-sweetened items for parties and snacks
- Candy use is fairly common for classroom management and lessons
- Only 2/3 of schools provide nutrition information to students and parents
Next steps:

We will continue to evaluate these policies and practices to track changes over time.

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Thank you!