Nutrition Claims Influence Health Perceptions and Taste Preferences in Fourth- and Fifth-Grade Children

Jessica Soldavini, MPH, RD
Lorrene Ritchie, PhD, RD

JNEB Journal Club
January 28, 2013
Learning Objectives

- Describe how nutrition claims influence fourth- and fifth-graders’ perceptions of product **healthfulness**
- Describe how nutrition claims influence children’s perceptions of product **taste**
- Discuss how **different types** of nutrition claims may have **different effects** on children’s perceptions of products
Nutrition Claims

• Used to make products appear healthy
• Influence preferences and purchase intentions of adults
• Children may be more susceptible than adults
• But few studies and disparate findings in children

Research Questions

1. Do children think that products with a nutrition claim are **healthier or not** than those without?

2. Does the presence of a nutrition claim affect the way a child perceives product **taste**?

Hypotheses

Compared to the product without a nutrition claim, children will perceive the product with a nutrition claim as:

1) Healthier…. but

2) Not tasting as good
Sample

- Convenience sample
- 47 fourth- and fifth-grade students
- 3 classrooms
- 3 elementary schools
- Parent consent
## Sample Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Study Participants&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Participants’ Schools&lt;sup&gt;b,c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Students</strong></td>
<td>47</td>
<td>431 ± 39.6</td>
</tr>
<tr>
<td><strong>Grades</strong></td>
<td>4-5</td>
<td>K-6</td>
</tr>
<tr>
<td><strong>Gender (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>55 ± 2</td>
</tr>
<tr>
<td>Female</td>
<td>52</td>
<td>45 ± 2</td>
</tr>
<tr>
<td><strong>Ethnicity (%)&lt;sup&gt;d&lt;/sup&gt;</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>17</td>
<td>25 ± 26</td>
</tr>
<tr>
<td>Black</td>
<td>6</td>
<td>14 ± 15</td>
</tr>
<tr>
<td>Hispanic</td>
<td>36</td>
<td>51 ± 32</td>
</tr>
<tr>
<td>Indian</td>
<td>6</td>
<td>0 ± 1</td>
</tr>
<tr>
<td>White</td>
<td>9</td>
<td>3 ± 5</td>
</tr>
<tr>
<td>Other/Not Reported</td>
<td>26</td>
<td>6 ± 4</td>
</tr>
</tbody>
</table>

<sup>a</sup> Obtained from student self-report.  
<sup>b</sup> Obtained from the California Department of Education.  
<sup>c</sup> Mean ± SD from the 3 schools from which participants were recruited.  
<sup>d</sup> Percentages may not add up to 100% due to rounding.
Procedure

Each child presented with three sets of products

- Reduced Fat
- Whole Grain
- 100% Juice
Procedure

• Food item placed in front of it each package

• Each child asked:
  • “Which product do you think is healthier?”
  • “Which product do you think tastes better?”
Results
Which Cookie is Healthier?

- 81% With nutrition claim
- 13% Same or not sure
- 6% Without nutrition claim

P<0.001
Which Cracker is Healthier?

- With nutrition claim: 83%
- Same or not sure: 4%
- Without nutrition claim: 13%

P < 0.001
Which Juice is Healthier?

- With nutrition claim: 72%
- Same or not sure: 5%
- Without nutrition claim: 23%

P < 0.001
Which Cookie Tastes Better?

- With nutrition claim: 72%
- Same or not sure: 5%
- Without nutrition claim: 23%

P = .002
Which Cracker Tastes Better?

- 67% With nutrition claim
- 29% Same or not sure
- 4% Without nutrition claim

P = .01
Which Juice Tastes Better?

- 54% with nutrition claim
- 39% without nutrition claim
- 7% same or not sure

P = 0.29
Do Different Nutrition Claims Have Different Effects or Does the Product Matter?

- Children preferred the taste of **snack foods** (cookies and crackers) with nutrition claims.
- Children’s preference for the **juice** with or without the nutrition claim was not significantly different.
Nutrition Claims and Snack Food Preferences

- 10-year old children more likely to choose low-fat over high-fat cookie\(^1\)
- 8- to 14-year old children\(^2\)
  - Less likely to prefer taste of cookie labeled as “chickpea chocolate chip” than “chocolate chip”
  - No difference for other vegetable-labeled (zucchini and broccoli) products

Nutrition Claims and Beverage Preferences

- When 9- to 11-year old children told a beverage was a “health drink”:
  - Perceptions of taste and willingness to buy it decreased

Study Limitations

- Relatively small convenience sample
- Results may not apply to other populations
- Study took place in a classroom setting with teacher and other students present
Implications for Future Practice

• Children may choose some products on the basis of perceived health

• Nutrition claims may be useful to influence children’s food choices
Implications for Future Research

• Are similar results obtained with different populations and other types of products?

• What other factors may influence children’s food and beverage preferences in response to nutrition claims?
Questions
Become an SNEB member!

**Benefits of membership**

- Professional Member - $190 per year
- Associate Member - $95 per year
- Student Member - $60 per year
- Subscription to the *Journal of Nutrition Education and Behavior*
- Free access to live and recorded webinars
- Deepest discount to attend the SNEB Annual Conference
- Membership in an SNEB specialty division
- Connection to other professionals through SNEB listserv
- [www.sneb.org/join](http://www.sneb.org/join)