Examining the Association Between Student Perception of Cafeteria Environment and Where Students get their Lunch

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Background

- 1 in 5 US school-aged children (6 to 19 years) have obesity¹.
- Sedentary behavior and poor diet are major contributors to obesity.
- Eating school lunches is associated with higher overall diet quality compared to lunches brought from home².
- Previous studies have shown that lunches brought from home have more sugar, salt, and saturated fat content compared to school lunches³.
- Very few studies have examined student perception of cafeteria environment and whether these perceptions are associated with where students get their lunch.
- Wellness Champions for Change (WCC), a 3-armed pilot randomized controlled trial in 63 Maryland schools (5 systems), aimed to enhance local wellness policy (LWP) implementation.

Study Objectives

Research Question: Is student perception of cafeteria environment associated with where they get their lunch?

Hypothesis: Students who have more favorable perceptions of the cafeteria will be more likely to purchase school lunches compared to those with poor perceptions.

Study Methods

Patterns of Diet at School (PODS) Survey⁴

- Included seven Likert-type items related to student perception of cafeteria environment. Summed for a final Likert scale ranging from 0-28.
  - Cronbach Alpha = 0.81
- Assessed where students received their lunch most of the time.
  - Your home or the home of the person that cares for you
  - From the school cafeteria
  - Other (excluded)
  - I never eat lunch (excluded)

Perception of Environment at School: Cafeteria Subscale

Analysis

- Bivariate analysis and generalized linear mixed models were constructed to assess the relationship between location of lunch and student perceptions.

Results

- Bivariate analysis conducted in SAS 9.4
- The initial model tested the interaction between perception and school type, indicating there was a significant interaction between the two (p=0.014). Therefore, the results were stratified by school type.

Conclusions

- Discussion
  - There is a significant relationship between student perception of their cafeteria environment and where they get their lunch. The relationship between perception and location of lunch is stronger for middle school students than elementary school students.
  - Future studies should evaluate ways to improve perception of student perceptions and what factors play into the perception.

Limitations

- Due to the cross-sectional nature of the analysis, cannot determine if perception influences lunch location decision, or where students get their lunch influences their perception. Future studies should be conducted to address this.
- Survey data is self-reported which may introduce information bias.

Analysis of Perception

<table>
<thead>
<tr>
<th>School</th>
<th>Where do you get your lunch most of the time</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Home</td>
<td>Home of Caretaker</td>
<td>181</td>
<td>13.28</td>
<td>6.55</td>
</tr>
<tr>
<td>Elementary School</td>
<td>School Cafeteria</td>
<td>199</td>
<td>14.73</td>
<td>6.22</td>
</tr>
<tr>
<td>Middle Home</td>
<td>Home of Caretaker</td>
<td>83</td>
<td>9.13</td>
<td>5.14</td>
</tr>
<tr>
<td>Middle School</td>
<td>School Cafeteria</td>
<td>206</td>
<td>11.65</td>
<td>5.14</td>
</tr>
</tbody>
</table>

Adjusted Type III Tests of Fixed Effects Between Location of Lunch and Covariates

<table>
<thead>
<tr>
<th></th>
<th>Elementary Schools</th>
<th>Middle Schools</th>
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</thead>
<tbody>
<tr>
<td>Fixed Effects</td>
<td>F Value</td>
<td>Pr &gt; F</td>
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<td>0.5997</td>
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</table>

References