The Presence of Role Modeling Healthy Eating in Early Childhood Education Facilities

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Background

Introduction

- Children do not eat recommended amounts of vegetables (Banfield, et al., 2016).
- Vegetable intake is associated with decreased risk for colon and rectal cancer, stroke, pancreatic diseases, and hip fracture (Angelino, et al., 2019).
- 73% of 3-5-year-old children participate in weekly care provided by someone other than their parent (U.S. Department of Education, 2016).
- 3-5-year-old children spend on average, 21 hours per week in child care (U.S. Department of Education, 2016).

Literature Review

- Role modeling healthy eating has been defined as eating with children, eating the same foods as children, and enthusiastically showing enjoyment of healthy foods.

Providers' Use of Role Modeling

- Providers do not eat unhealthy food in front of children (Erinosho, Hales, Mc Williams, Efrem, & Ward, 2012; Tovar, et al., 2019).
- Many providers reported eating the same food as the children they care for (Gubbels, Gerards, & Kremers, 2015; Tovar, et al., 2019).
- Differences by Facility Type (Head Start, Center-based, or Home-based)
  - Head Start teachers more likely to role model healthy eating (Dev, et al., 2013; Dev, et al., 2014).
  - Home-based providers may be less likely to eat fruits and vegetables in front of children (Tovar, et al., 2019).

Research Questions

1. Do child care providers use best practices around role modeling?
2. Are differences between Head Start, center-based, and home-based child care providers in providers' use of best practices around role modeling?

The interview data were then used to better understand our findings from the quantitative strand.

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Survey Sample n (% )</th>
<th>Interview Sample n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49 years old and younger</td>
<td>185 (58)</td>
<td>37(74)</td>
</tr>
<tr>
<td>50 years old and older</td>
<td>134 (42)</td>
<td>13 (26)</td>
</tr>
<tr>
<td>Years providing care</td>
<td>7.4 (9.7)</td>
<td>11.74 (8.51)</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school degree or GED</td>
<td>81 (26)</td>
<td>9 (18)</td>
</tr>
<tr>
<td>Associate's degree</td>
<td>167 (52)</td>
<td>15 (30)</td>
</tr>
<tr>
<td>Bachelor's degree or more</td>
<td>95 (30)</td>
<td>18 (35)</td>
</tr>
<tr>
<td>Master's degree or more</td>
<td>39 (12)</td>
<td>8 (16)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>234 (73)</td>
<td>37 (74)</td>
</tr>
<tr>
<td>Center participated in CACFP</td>
<td>254 (79)</td>
<td>39 (71)</td>
</tr>
<tr>
<td>Center had written policy about how food is served</td>
<td>193 (60)</td>
<td>31 (71)</td>
</tr>
</tbody>
</table>

Note: 1 variable had more than 6% missing data. No variables had more than 6% missing.

Figure 1: Best Practices in Role Modeling by Facility Type

- Rarely or never drinks soda in front of the children
- Rarely or never eats snacks in front of the children
- Rarely or never eats sweets in front of the children
- Always eats and drinks the same foods and beverages as the children
- Always enthusiastically role models healthy eating

We used the interview data to explain the three main findings from the quantitative strand.

Quantitative Finding 1: Less than 50% of providers in center- and home-based settings reported always eating and drinking the same foods and beverages as the children.

Quantitative Finding 2: More than 50% of providers in all settings reported using enthusiastic role modeling.

Quantitative Finding 3: More than 80% of providers in all settings reported rarely or never eating or drinking unhealthy foods (soda, snacks) in front of the children.

Methods

Quantitative Data Collection & Sample

- Convenience sample of child care providers and ECE teachers.
- Inclusion criteria: over 18 years old, employed as a child care provider or Head Start teacher at a facility licensed by the state of Illinois, and responsible for feeding 3-5-year-old children in a main meal (breakfast, lunch, or dinner) at least 3 times a week.

Participants completed a 95-item survey either online (69%) or using paper and pencil (31%) and provided written informed consent before completing the survey.

Measures

- Independent Variable: Facility type (Head Start, center-based, or home-based care)
- Provider's Variable: Meeting best practices for role modeling
  - 5 questions from the NAP SACC self-assessment (Benjamin, et al., 2007)
  - Covariates: respondent's age, number of years providing care, education level, literacy, center's participation in CACFP, and the presence of a written policy about how food should be served at the respondent's ECE facility.

Analysis

- Used survey data to conduct the following analyses:
  - Frequencies and means to describe the sample and answer the first research question
  - Logistic regression models to predict use of role modeling best practice while adjusting for covariates and pairwise contrasts to determine statistically significant differences to answer the second research question.

Qualitative Data Collection and Sample

- 50 survey respondents completed in-depth phone interviews
- Purposively sampled to compare across facility type and participation in CACFP.
- Interviews were digitally recorded and professionally transcribed.

Analysis

- Thematic analysis (Braun & Clarke, 2006) conducted by both authors working together.

Discussion

Implications

- Nutrition programming
  - Home-based provider could benefit the most from a nutrition education program
  - Would receive training on role modeling

- Policies in all facilities should stress the importance of role modeling and highlight best practices
  - Enthusiastic role modeling in particular should be emphasized
  - There should also be trainings for directors
  - Trainings should focus on how to write wellness policies and the recommendations about nutrition and healthy eating from experts

Future research

- Future research should focus on facility design to figure out if elements such as classroom size affect providers’ role modeling
- Research should focus on home-based facilities because they struggle the most when it comes to eating the same food as the children

- Participation in CACFP: Providers are a question about whether providers believe healthy eating is want when enthusiastic role modeling occurs

Limitations

- Self-report measures were used and these measures are not always accurate
- Future research should use direct observation

Strengths

- Our sample included Head Start, center-based, and home-based providers
- We used both survey and interview data

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