Process Evaluation Results of a Smarter Lunchrooms Study in New York State Middle Schools

Presented by Alisha Gaines, PhD, Cornell University Division of Nutritional Sciences

Welcome, thank you for joining!

To connect to audio, please click “Quick Start” towards the top left hand corner and then “Connect to Audio.” Then select one of the 3 connection options and follow the instructions.

During the last 10 minutes of this presentation Alisha will address as many questions as time allows. To ask a question please use the Q & A feature.

If you are interested in joining the Healthy Food Choices in Schools Community of Practice or have any questions, please contact us at: healthy_food_choices_in_schools@cornell.edu
Presentation Outline

• Introduction

• Study
  • Purpose
  • Design overview

• Process evaluation
  • Purpose
  • Design and methods

• Process evaluation results
  • Real-world takeaways

• Big-picture takeaways
The Smarter Lunchrooms AFRI

The Smarter Lunchrooms Movement (SLM)

• Easy no- or low-cost changes to encourage students to select and consume healthier foods in school without eliminating their choices

Food and Nutrition Education in Communities group (FNEC)

• Research and nutrition education programming with low-income families
• Strong ties with Cornell Cooperative Extension (CE)

Agriculture and Food Research Initiative (AFRI)

• BEN-FNEC-CE study funded 2012-2017
Study Purpose

Overall objective:

• Examine effectiveness of SLM strategies in increasing students’ selection and consumption of fruit, vegetables, and unsweetened milk.

• Used a series of randomized controlled trials in New York State middle schools.

Year 4 objective:

• Examine effectiveness of changes in schools that self-selected intervention protocol, compared with matched schools that were assigned protocols.
Role of CE

1. Recruit schools
2. Attend training from campus staff
3. Train food service staff
4. Provide weekly, in-person support to food service staff during intervention
Year 4 Overview

- Self-selection schools (n=3)
- Matched, assigned schools (n=5)
- Control schools (n=4)
Year 4 Overview

- Self-selection schools (n=3)
- Matched, assigned schools (n=5)
- Control schools (n=4)

Select intervention components
Year 4 Overview

- **Self-selection schools**
  - (n=3)
  - Select intervention components
  - Plate waste measures

- **Matched, assigned schools**
  - (n=5)
  - Plate waste measures

- **Control schools**
  - (n=4)
  - Plate waste measures
Year 4 Overview

- **Self-selection schools (n=3)**
  - Select intervention components
  - Plate waste measures
  - Training from CE

- **Matched, assigned schools (n=5)**
  - Plate waste measures
  - Training from CE

- **Control schools (n=4)**
  - Plate waste measures
  - Unrelated training from CE
Year 4 Overview

Self-selection schools (n=3)
- Select intervention components
- Plate waste measures
- Training from CE
- 6 wk lunchroom changes with CE support

Matched, assigned schools (n=5)
- Plate waste measures
- Training from CE
- 6 wk lunchroom changes with CE support

Control schools (n=4)
- Plate waste measures
- Unrelated training from CE
- No lunchroom changes, no CE support

Select intervention components

Plate waste measures

Training from CE

6 wk lunchroom changes with CE support
Year 4 Overview

- **Self-selection schools (n=3)**
  - Select intervention components
  - Plate waste measures
  - Training from CE
  - 6 wk lunchroom changes with CE support
  - Plate waste measures

- **Matched, assigned schools (n=5)**
  - Plate waste measures
  - Training from CE
  - 6 wk lunchroom changes with CE support
  - Plate waste measures

- **Control schools (n=4)**
  - Plate waste measures
  - Unrelated training from CE
  - No lunchroom changes, no CE support
  - Plate waste measures
  - Changes offered later with CE support
Schools selected or were assigned 2 fruit, 2 vegetable, & 2 milk protocol items.

**Today’s Menu:**
- Turkey Burger
- Fantastic Fruit
- Monkey Fuel
- X-Ray Vision Carrots & Hummus
- Broccoli Bites
- Wheat Bun
- White Milk

**Weekly Fruit Factoid**
- Pineapple rings

**Weekly Vegetable Factoid**
- Creative names are displayed next to fruit and vegetables.
- (2 schools)

**Laminated sheets of “Fruit Factoids” and “Veggie Factoids” are displayed in a visible location.**
- (5 schools fruit, 5 schools veg.)

**Cut fruit and raw vegetables are displayed in attractive cups.**
- (6 schools)

**Fruit is displayed first on the line.**
- (3 schools)

**Creative names**
- “Ice cold white milk” signs are displayed next to beverage options.
- (8 schools)

**Vegetables are displayed after the entrée.**
- (3 schools)

**Progression of lunch line**

**Register**
Process Evaluation

What is process evaluation?
- What happened? How? Why?
- Informs outcome results

Pre-intervention plate waste data

Post-intervention plate waste data
Process Evaluation

Process evaluation objectives for this study:
- Monitor protocol fidelity
- Determine maintenance post-intervention
- Identify facilitators and barriers to implementation
Process Evaluation Timeline and Measures

**Pre-Intervention**
- Recruit and randomize schools
- CE training
- School training

**6-week intervention**
- Weekly site visits
- 3 lunchroom audits

**Post-Intervention**
- Lunchroom audit (2 weeks post)
- CE and food service interviews

**Process data:**
- Recruitment notes
- Training records
- School environmental assessments
- Contact logs
- Lunchroom audits with fidelity checklists for scoring, photos, and field notes
- Post-intervention interviews
## RE-AIM Framework & Process Evaluation Measures

<table>
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<th>Recruitment notes</th>
<th>Environmental assessments</th>
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| School            | Nutrition education, food advertising, etc. not with the study | • CE & food service evaluations  
• Training delivery records | Weekly logs used to communicate challenges, concerns, & requests | Conducted pre-, during, & post-intervention & included:  
• field notes  
• fidelity checklists  
• photographs | Interviews with CE & food service to assess barriers, facilitators |
RE-AIM Framework & Process Evaluation Measures

Reach
Description of students exposed to intervention

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### Recruitment notes
- School
- Enrollment
- Free & reduced lunch participation
- Students' family income status

### Environmental assessments
- Nutrition education, food advertising, etc. not with the study

### Training records
- CE & food service evaluations
- Training delivery records

### Contact logs
- Weekly logs used to communicate challenges, concerns, & requests

### Lunchroom audits
- Conducted pre-, during, & post-intervention & included:
  - Field notes
  - Fidelity checklists
  - Photographs

### Interviews
- Interviews with CE & food service to assess barriers, facilitators
RE-AIM Framework & Process Evaluation Measures

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- Description of students exposed to intervention

Effectiveness
- External influences (contamination)

Adoption
- Number of schools participating, number of staff trained & their preparedness

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- School
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RE-AIM Framework & Process Evaluation Measures

**Reach**
- Description of students exposed to intervention

**Effectiveness**
- External influences (contamination)

**Adoption**
- Number of schools participating, number of staff trained & their preparedness

**Implementation**
- Fidelity to the intervention protocol

**Maintenance**
- Adherence beyond the intervention end date

**Recruitment notes**
- School enrollment
- Free & reduced lunch participation
- Students' family income status

**Environmental assessments**
- Nutrition education, food advertising, etc. not with the study

**Training records**
- CE & food service evaluations
- Training delivery records

**Contact logs**
- Weekly logs used to communicate challenges, concerns, & requests

**Lunchroom audits**
- Conducted pre-, during, & post-intervention & included:
  - field notes
  - fidelity checklists
  - photographs

**Interviews**
- Interviews with CE & food service to assess barriers, facilitators
Results: Reach

- 8337 6th-8th graders enrolled
  - ~40% (3335 students) receiving free or reduced-price meals
  - 4% Black, 4% Hispanic, 84.5% White, 7.5% other

- Real-world takeaways:
  - Important to know who you’re reaching for yourselves, administration, external partners, funders
  - Information like this is often easy to find

Data sources: Recruitment notes, NY State Dept. of Education (NYSED) data
Results: Effectiveness

- Sources of ‘contamination’
  - Other food service department efforts
  - Education department food and nutrition programming
  - Wellness policy activities

- Real-world takeaways:
  - Events occurring at the same time, good or bad, can affect your project
    - Want to be able to claim that your project produced the results and provide documentation about why or what not that might be true
  - Use institutional knowledge of staff, documents like wellness policies or school-wide assessments

https://www.cdc.gov/healthyschools/nutrition/schoolnutrition.htm

Data source: Environmental assessments, field notes
Results: Adoption

School

• 12 schools in Broome, Oswego, Schenectady, and Albany counties
  • 9 urban, 3 rural
  • 3 self-selection protocol, 5 matched assigned protocol, 4 control

• Factors impacting participation decisions
  • Previous research experience
  • Administrator buy-in
  • Internal and external reviews

• Real-world takeaways:
  • Many factors impact schools’ decisions to participate in new projects
    • Be prepared; be willing to listen and address what you can
  • The time this takes varies, so always plan for more when building relationships with schools

Data sources: Recruitment notes, NYSED data
Results: Adoption

Cooperative Extension

- Training received by campus staff
  - 6 staff trained in 1 day sessions
  - High evaluation ratings (4.6/5)
  - Liked organization, details, enhanced understanding, networking
  - Suggested more movement

- Training delivered to food service staff
  - Scheduling challenges
  - Changes to training included increased detail, demonstration
  - Largely supportive school food service staff

Data sources: training records, contact logs, interviews
Results: Adoption

Food service staff

- 49 staff trained in ~45 min. sessions

- High evaluation ratings (4.5/5)
  - Liked NEW IDEAS & underlying approach (sharing concern, addressing problems)
  - Liked interactivity, materials provided
  - Suggested some changes for intervention materials

- Real-world takeaways for food service training:
  - Be aware of, sensitive to, and prepared to work with staff limited break time for external project training
  - Multiple presentation styles, including demos, are helpful
  - Recognize staff expertise and solicit their feedback, formally or informally

Data sources: training records, contact logs, interviews
Results: Implementation & Maintenance

Fidelity scores pre-, during, and post-intervention

Data sources: Lunchrooms audits (fidelity checklists)
Summary: Facilitators & Barriers

Barriers
- Health department regulations
- Kitchen structure
- Time restraints

Implementation Fidelity
- Administrative support
- Staff excitement, dedication
- Satisfactory training efforts
- Support from interventionists, campus

Facilitators
Additional Takeaways for Real-world Application

• Have the data to help tell your story.
  • Process evaluation is essential, and RE-AIM is a helpful framework.
  • Determine methods for monitoring progress and gathering feedback.

• Involve food service staff in all aspects, including planning and evaluation.
  • Motivation is key! Talk about working with staff to accomplish shared goals.
  • Build in opportunities for dialogue and constructive feedback.
    • CE can facilitate this dialogue.

• Partnerships can be mutually beneficial.
  • For some schools, external support is great! For those that want to work with schools, like CE, the cafeteria may be a place to start!
  • Clearly define roles and designate point persons for communication.
Resources

Implementing Smarter Lunchrooms Makeovers in New York state middle schools: an initial process evaluation
  • Contact Alisha Gaines (againes@cornell.edu) with questions

SLM
  • http://smarterlunchrooms.org/
  • Other SLM webinars
    • Measuring the Long-Term Impact of Behavioral Interventions in School Cafeterias
      https://learn.extension.org/events/2856

Food and Nutrition Education in Communities (FNEC)
  • http://fnec.cornell.edu/

SNAP-Ed Toolkit
Acknowledgements

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• **Principal Investigators** Brian Wansink, David Just, and Jamie Dollahite

• Develop Healthy Eating Dialogues content group members

• FNEC group