IMPLEMENTING GROUP NUTRITION EDUCATION IN OGDEN, KANSAS

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Master of Public Health Field Experience Presentation
Kansas State University
November 7th, 2012
Overview

- Background
  - EFNEP
  - Ogden
  - Abbreviated design
- Program descriptions
- Promotional methods
- Results and feedback
- Implications for Public Health
- Reflection
EFNEP Background

- Expanded Food & Nutrition Education Program (EFNEP)
  - Funded by NIFA (formally CSREES)
  - Limited resource populations
  - 10-12 week adult program length
  - “Gold Standard”
EFNEP Outcomes

- Increased nutrition knowledge and improved food and nutrition practices (Greenwell et al., 2000).

- Positive health behaviors practiced by Kansas EFNEP participants:
  - 56% more likely to thaw foods safely
  - 71% used food labels more often when making food choices
  - 87% improve in one or more areas of food resource management
  - 95% improve in one or more nutrition practice
  - 43% showed increase in physical activity
  - 47% increased number of meals eaten together
  (EFNEP Kansas Annual Report, 2010)

- Economic impact:
  - $10.64 savings in health care costs and $2.48 savings on food costs for every $1 spent on EFNEP (Rajgopal et al., 2002).
Shorter duration, EFNEP curriculum

Goal: observe outcomes related to health behavior changes with same curriculum, but with shorter format to mitigate issues of long programs
## Income and SNAP Participation Comparison of Riley County

<table>
<thead>
<tr>
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<tbody>
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2010 U.S. Census Bureau Data
## Income and SNAP Participation Comparison of Riley County

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Adult Program

- Two, four-week sessions
- Participant guides developed from “EFNEP Families – Eating Smart and Moving More” scripts
- Class recipe and “Move More” breaks
Adult Program

- **Session One**
  - Class One: Introduction of EFNEP and “Fix It Safe”
  - Class Two: “Know What’s for Dinner”
  - Class Three: MyPlate
  - Class Four: “Shop For Value, Check the Facts”
Session Two
Class One: Introduction of EFNEP and “Fix It Safe”
Class Two: “Know What’s for Dinner”
Class Three: “Fix It Fast”
Class Four: “Smart Size Your Portions and Right Size You”
Kids Program
Kids Program

Each class = take home message + recipe + physical activity “break”

- Class 1: Eat the Rainbow
- Class 2: Grains
- Class 3: Fruits
- Class 4: Dairy
- Class 5: Vegetables

- Class 6: Proteins
- Class 7: Healthy Snacks/Serving Sizes
- Class 8: Limiting Fat and Sugar
- Class 9: MyPlate
Methods of Evaluation

- Adult Program:
  - Pre and post 24 hour recall (and one month follow up for Session 1)
Methods of Evaluation

- Adult Program:
  - Pre and post 24 hour recall (and one month follow up for Session 1)
  - Pre and post behavioral survey (and one month follow up for Session 1)
Methods of Evaluation

- **Adult Program:**
  - Pre and post 24 hour recall (and one month follow up for Session 1)
  - Pre and post behavioral survey (and one month follow up for Session 1)

- **Kids Program:**
  - Adult Feedback Questionnaire

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**Adult Feedback**

Kid's Cooking/Nutrition classes
Ogden Community Center

1. Has your child told you they enjoy coming to the classes?  
   - YES  
   - NO

2. Has your child spoke about the classes at home or outside school?  
   - YES  
   - NO

3. Has he or she asked for some different foods at home?  
   - YES  
   - NO
   
   If so, what types of foods?

4. Have you noticed any changes in his or her nutrition knowledge or eating habits?  
   - YES  
   - NO
   
   If so, what have you noticed?

Any additional comments?

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*(Out below this line – return top portion and keep invitation)*

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**YOU'RE INVITED!**

**EFNEP**

Wednesdays in September (9th, 16th, 23rd, 30th)
(Come and join us even if you didn’t make it to the first class!)
6pm, Ogden Community Center

Cook and eat new recipes such as stir-fry, quiche, pasta, bakes, etc...
Get easy meal ideas, feel good about the foods you and your family eat and much more!
Call (785) 537-0351 to sign up or just come on by for this FREE program. Hope to see you there!
Program Promotion

- Flyers (mail outs & handouts)
- Follow-up calls
- Newsletter
- Samples
- Stickers
Session 1: Grain Consumption

% positive change = 100

n = 4
Session 1: Fruit Consumption

% positive change = 50
Session 1: Vegetable Consumption

% positive change = 100

n = 4
Session 1: Milk Consumption

% positive change = 75
Session 1: Meat & Bean Consumption

% positive change = 50
### Session 2: 24-hour Recall Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean ± StD</th>
<th>% Positive Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Entry</td>
<td>Exit</td>
</tr>
<tr>
<td>Grains (oz)</td>
<td>7.4 ± 2.9</td>
<td>5.8 ± 0.8</td>
</tr>
<tr>
<td>Fruits (cups)</td>
<td>0.1 ± 0.1</td>
<td>0.1 ± 0.1</td>
</tr>
<tr>
<td>Vegetables (cups)</td>
<td>1.0 ± 1.0</td>
<td>0.7 ± 0.7</td>
</tr>
<tr>
<td>Milk (cups)</td>
<td>1.9 ± 1.5</td>
<td>1.0 ± 0.4</td>
</tr>
<tr>
<td>Meats &amp; Beans (oz)</td>
<td>6.2 ± 1.8</td>
<td>6.4 ± 1.1</td>
</tr>
</tbody>
</table>
### Session 1 Behavioral Checklist

**Outcomes – Food Resource Management Practices**

<table>
<thead>
<tr>
<th>Entry vs. exit survey responses</th>
<th>Entry vs. follow-up survey responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% more often planned meals in advance</td>
<td>Same as entry versus exit survey response</td>
</tr>
<tr>
<td>No participant compared prices more often when shopping</td>
<td>25% compared prices more often when shopping</td>
</tr>
<tr>
<td>75% less often ran out of food before the end of the month</td>
<td>67% less often ran out of food before the end of the month</td>
</tr>
<tr>
<td>25% more often used a list for grocery shopping</td>
<td>Same as entry versus exit survey response</td>
</tr>
</tbody>
</table>
### Session 1 Behavioral Checklist Outcomes – Nutrition Practices

<table>
<thead>
<tr>
<th>Entry vs. exit survey responses</th>
<th>Entry vs. follow-up survey responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>50%</strong> more often planned meals in advance</td>
<td><strong>Same</strong> as entry versus exit survey response</td>
</tr>
<tr>
<td>50% more often thought about healthy food choices when deciding what to feed their family</td>
<td>100% more often thought about healthy food choices when deciding what to feed their family</td>
</tr>
<tr>
<td><strong>25%</strong> more often prepared foods without adding salt</td>
<td><strong>Same</strong> as entry versus exit survey response</td>
</tr>
<tr>
<td>25% more often used the “Nutrition Facts” on food labels to make food choices</td>
<td>50% more often used the “Nutrition Facts” on food labels to make food choices</td>
</tr>
<tr>
<td>No participant reported that their children ate breakfast more often</td>
<td><strong>Same</strong> as entry versus exit survey response</td>
</tr>
</tbody>
</table>
### Session 1 Behavioral Checklist

**Outcomes – Food Safety Practices**

<table>
<thead>
<tr>
<th>Entry vs. exit survey responses</th>
<th>Entry vs. follow-up survey responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% more often followed recommended practices of not letting meat and dairy stay at room temperature for more than 2 hours</td>
<td><strong>Same</strong> as entry versus exit survey response</td>
</tr>
<tr>
<td>50% more often followed recommended practices of not thawing foods at room temperature (25% always followed recommended practice)</td>
<td>100% more often followed recommended practices of not thawing foods at room temperature (25% always followed recommended practice)</td>
</tr>
</tbody>
</table>
Session 2 Behavioral Checklist Outcomes

- **Food Resource Management Practices**
  - No participant more often planned meals in advance
  - No participant compared prices more often when shopping
  - 33% less often ran out of food before the end of the month
  - No participant more often used a list for grocery shopping

- **Nutrition Practices**
  - No participant more often planned meals in advance
  - 33% more often thought about healthy food choices when deciding what to feed their family
  - 67% more often prepared foods without adding salt
  - 67% more often used the “Nutrition Facts” on food labels to make food choices
  - No participant reported that their children ate breakfast more often

- **Food Safety Practices**
  - No participant more often followed recommended practices of not letting meat and dairy stay at room temperature for more than 2 hours
  - 67% more often followed recommended practices of not thawing foods at room temperature
# Session 1 vs. Session 2 Outcomes

<table>
<thead>
<tr>
<th>Mean Intake</th>
<th>Overall Positive Change Entry v. Exit</th>
<th>Overall Positive Change Entry v. Exit</th>
<th>Overall Positive Change Entry v. F/U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains (oz)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fruits (cups)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Vegetables (cups)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Milk (cups)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Meats &amp; Beans (oz)</td>
<td>Met rec</td>
<td>Met rec</td>
<td>Met rec</td>
</tr>
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</table>
Entry vs. Exit Behavioral Survey Outcomes:

- Session 1 showed greater improvement in 3 out of 4 *food resource management practices* than Session 2
- Session 2 showed greater improvement in 3 out of 5 *nutrition practices* than Session 1
- Both sessions showed improvement in one of the two *food safety practices*
## Kids Program Outcomes

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Response</th>
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<tbody>
<tr>
<td>Has your child told you they enjoy coming to the classes?</td>
<td>100% answered “Yes”</td>
</tr>
<tr>
<td></td>
<td>0% answered “No”</td>
</tr>
<tr>
<td>Has your child spoke about the classes at home or outside of class?</td>
<td>100% answered “Yes”</td>
</tr>
<tr>
<td></td>
<td>0% answered “No”</td>
</tr>
<tr>
<td>Has he or she asked for different foods at home? If so, what types of foods?</td>
<td>67% answered “Yes”</td>
</tr>
<tr>
<td></td>
<td>33% answered “No”</td>
</tr>
<tr>
<td>Of those that answered “Yes”:</td>
<td></td>
</tr>
<tr>
<td>25% responded vegetables</td>
<td></td>
</tr>
<tr>
<td>25% responded meat and dairy</td>
<td></td>
</tr>
<tr>
<td>50% responded fruit</td>
<td></td>
</tr>
<tr>
<td>Have you notice any changes in his or her nutrition knowledge or eating habits?</td>
<td>100% answered “Yes”</td>
</tr>
<tr>
<td>If so, what have you noticed?</td>
<td>0% answered “No”</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>33% Try different foods</td>
<td></td>
</tr>
<tr>
<td>33% Eating the rainbow</td>
<td></td>
</tr>
<tr>
<td>17% Eating more fruit</td>
<td></td>
</tr>
<tr>
<td>17% Eating more vegetables</td>
<td></td>
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Responses to Adult Feedback Form ($n = 6$)
Implications for Public Health

- Healthy People 2020 objectives:
  - Increase fruit, vegetable, and whole grain intake, and to reduce intake of saturated fats, sugar, and sodium in the diet of Americans (Healthy People 2020)
- Development of collective efficacy and capacity needed to reach attainable goals as a community
- Further observance of health behavior outcomes from abbreviated EFNEP programs
Reflection

- **Challenges**
  - Recruitment

- **What went well**
  - Participant guide
  - Discussion-based learning

- **What went not so well**
  - Veggie tasting

- **Change**
  - Earlier promotion
  - Kids evaluation

- **Limitations**

- **Future**
  - Growth of group nutrition programs in Ogden for both adults and kids
Acknowledgements

- Dr. Paula Peters
- Dr. Mark Haub
- Dr. Kevin Sauer
- Ginny Barnard
- Dr. Sandy Procter
- Dr. Michael Cates
- Barta Stevenson
- Linda Lamb
- Mariah Boller
- Jutta Carroll