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## Food Safety Education for Hispanic and Native American Audiences Using the Conceptual Change Model

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# **Abstract for DBER Group Discussion on 2013-10-31**

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**Title:**

Food Safety Education for Hispanic and Native American Audiences Using the Conceptual Change Model

**Abstract:**

Results from three research studies (USDA funded grants) indicated a need for food safety education for Hispanic and Native American families with young children. Focus groups and surveys results indicated that these two diverse audiences had less food safety knowledge and that some food handling practices could impact the safety of their family; in particular their children. Certain populations are at greater risk of contracting food-related illnesses and these groups include children and prenatal women. Several factors that contribute to foodborne illness susceptibility in children include underdeveloped immune systems, lower body weight, the sensitive nature of fetal development, and the fact that children have little control over what they are eating and how it is prepared. Therefore, the main food preparer in families with young children are responsible for safe food handling and preparation to prevent foodborne illness.

Both cultures, Hispanic and Native Americans have oral culture traditions. In focus groups conducted with members of both cultures, participants expressed a learning style like a focus group; a discussion with the group sitting around a table. We interpreted this as a collaborative learning style or using the conceptual change model. Therefore, we developed an educational program using this teaching model. Focus group and survey data provide the subject matter basis of the educational program. The conceptual change model requires the participants to share their current food safety knowledge in a non-threatening environment. The teacher functions as a facilitator of the discussion rather than a teacher imparting food safety knowledge. From the participants sharing current food safety knowledge, props (tools to help with implementing safe food handling practices) are used to facilitate the educational component; always starting with their current knowledge and building upon what they currently know in a discussion format. In the last part of the educational program, participants had an opportunity to apply the proper food handling practices in making a meal. During the educational program, qualitative research data was collect via video capture. Pre and post tests conducted provide quantitative data on knowledge gain and intention of behavior change.

# FOOD SAFETY EDUCATION FOR HISPANIC AND NATIVE AMERICAN AUDIENCES USING THE CONCEPTUAL CHANGE MODEL

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# Overview of Presentation

- ▣ Justification of educational program
- ▣ Conceptual Change Model (Teaching Strategy)
- ▣ Implementation of Conceptual Change Model for food safety education for Hispanic and Native American audiences

# Justification of Education Programming – Hispanic

- ▣ Food safety knowledge scores lower for Hispanic participants (Meysenburg, 2009)
- ▣ Traditional folk beliefs - hot and cold theory (Stenger, 2012)
- ▣ Fear – “susto” – (Stenger, 2012)
- ▣ Different food acquisition methods (daily from markets to weekly from grocery stores) (Stenger, 2012)
- ▣ Different views of foodborne illness by Hispanic participants (Meysenburg, 2009)
  - Tradition – mom gave egg yolk with sugar to kids, believing it develops immune system and makes them stronger

# Justification of Education Programming – Native American

- ▣ Low knowledge scores for food safety on quantitative component of study ((Vlasin-Marty, 2013)
- ▣ Confusion with foodborne illness with allergies and diet modifications for chronic diseases like diabetes (Vlasin-Marty, 2013)
- ▣ Improper food safety practices – excessive or misuse of bleach (Vlasin-Marty, 2013)

# Self-Efficacy

- ▣ All populations (Caucasians, Hispanic, Native American) were very confident in their ability to prepare food safely despite stating improper practices in focus groups and knowledge scores on quantitative measures.

# Cultures

- ▣ Both Native American and Hispanic cultures come from an “oral culture” tradition
  - “elder” in Native American Cultures
- ▣ Need a teaching/learning style appropriate for the culture

# Education

- ▣ Focus groups for Hispanic and Native American, asked how would you like to receive food safety education?
  - Classes/workshops
  - “we want a class like this” (meaning like a focus group)
  - Interactive learning style

# Conceptual Change

- ▣ The Conceptual Change Teaching Method (Posner et al., 1982)
- ▣ Students bring personal experiences to the classroom which shape their ability to learn.
- ▣ “Student-centered learning” process, educators gradually walk students through the material, acknowledge any misconceptions about the topics being discussed and help the students identify gaps with their current way of thinking (Zibel, 2006).
- ▣ Conceptual Change teaching method primarily utilized in the sciences
- ▣ Recently, Conceptual Change used with health-related information

# Conceptual Change Teaching Strategy (Model)

- ▣ Reveal student preconceptions
- ▣ Discuss and evaluate preconceptions
- ▣ Create conceptual conflict with those preconceptions
- ▣ Encourage and guide conceptual restructuring
- ▣ (Davis, J. 2012 Dept of Ed Psych and Instructional Tech, University of Georgia)

# Implementation of the Conceptual Change Model

- ▣ Introduction
- ▣ *Please tell me something about yourself?*
- ▣ *Please share your name;*
- ▣ *How many kids do you have?*
- ▣ *What do you do for a job?*
- ▣ *What activities are you involved in with your kids? For yourself?*
- ▣ *What is your favorite place? Why is it so special?*
- ▣ *What is the most comfortable room in your home? What makes it comfortable?*
- ▣ *How important is the kitchen to your family and you?*
- ▣ *What is your family's favorite meal/food?*

# Reveal student preconceptions

- ▣ *Discussion of Food Safety Kit*
- ▣ The educator will present an overview of what will be happening for the “Let’s FightBac!” program. Then, the educator will explain the food safety kit that will be provided to each participant.

- ▣ The educator will create a group chart by using “post-it-note poster board.” She will use this for introduction of the food safety kit.
- ▣ The poster board sheet will be labeled with questions as follow:
- ▣ Name of item   How it is used?   Why it is not used?

# Discuss and evaluate preconceptions

- ▣ the educator will engage the participants by asking the following questions:
- ▣ *Which items are familiar to you? When they give a response, ask: How do you use this item.*
- ▣ *What items are unfamiliar to you? When they give a response, ask: What do you think this is used for?*
- ▣ *What items do you have at home?*
- ▣ *What items don't you have ?*
- ▣ *What might you use instead of \_\_\_\_\_ (the items) in the kit?*
- ▣ *Why would we use \_\_\_\_\_ (name of item)?*

# Create conceptual conflict with those preconceptions

- ▣ To educate the participants on the Fight.Bac! food handling practices, the educator will tell a story about the “stomach flu.” (If a recent foodborne illness outbreak has occurred, use that outbreak as the story.)
- ▣ The poster board sheet will be labeled as follow:

▣ <u>Cause of Problem</u>	<u>How to prevent the problem</u>
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- ▣ *-What is the issue or problem described in this news story?*
- ▣ *-What are the symptoms of the “stomach flu?”*
- ▣ *-What are possible causes of the problems? (This is when the educator will start writing answers.)*
- ▣ *-What are some ways that might help prevent future outbreaks?*

- ▣ The FightBac! food handling concepts with key points to be covered during educational program.
  - 1: The first key concept is **CLEAN**:
  - 2: Another way to prevent food poisoning is to **SEPARATE**:
  - 3: The next concept is **COOK**:
  - 4: The last concept is **CHILL**:

# Encourage and guide conceptual restructuring

- ▣ *Recipe Discussion:*
- ▣ Dialogue:
- ▣ *The recipes we will be making today are Sombrero Salad and Fruit Salsa. You will be divided into groups of 2-3. Please take a look at the recipes and examine what you will need to make the recipes. When preparing the meals, I would like for you to keep in mind some of the food handling practices we discussed.*

- ▣ While enjoying the meal together, the educator will ask questions about the session.
  
- ▣ Dialogue:
- ▣ *When you were preparing the fruit salsa, what items from the food safety kit did you use?*
- ▣ *When you were preparing the sombrero salad, what items from the food safety kit did you use?*
- ▣ *How did you use that item?*
- ▣ *How does this compare to what was said in our original list (first flip chart)? What changes should be made to the original list?*
  
- ▣ *Going back to our scenario about the “stomach flu,” what safe food handling practices can be identified that would prevent this from happening in your home?*
- ▣ *Which safe food handling practices did we implement while making our meal?*
- ▣ *What things do we need to add now that we have made the meal and have some leftovers?*

- ▣ Discussion about the session:
- ▣ *What are your thoughts about how the session went?*
- ▣ *What did you like?*
- ▣ *What didn't you like?*
- ▣ *What will be easy for you to implement at home?*
- ▣ *What things might be difficult to implement? How will you overcome those difficulties?*

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- ▣ **USDA Food Safety for Families with Young Children, USDA-CSREES Project 2010-51110-21143.**