A Qualitative Investigation of Teachers’ Information, Motivation, and Behavioral Skills for Increasing Fruits and Vegetables Consumption in Preschoolers

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About Dr. Suzie Goodell...

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• Research Interests:
  – Qualitative Research
  – Childhood Obesity Prevention in Preschool Children from Low-Income Families
  – Nutrition Education/ Community Nutrition
Acknowledgements

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Overview

• Background
  – Qualitative vs Quantitative Research
  – Information-Motivation-Behavioral Skills Model

• Methods

• Results

• Discussion

• Question and Answer Time
BACKGROUND
Quantitative vs Qualitative Research

**Quantitative**
- Hypothesis Testing
- Numbers/ Statistics
- Reliability & Validity

**Qualitative**
- Hypothesis Generating
- Words/ Themes
- Trustworthiness

Qualitative research can occur **BEFORE**, **DURING**, or **AFTER** quantitative research as either an **EXPLORATORY** or **EXPLANATORY** process.
Childhood Obesity & Fruit and Vegetable (FV) Consumption

• Preschool-age: 3-5 years
• Childhood obesity is a major concern\(^1\)
  – Low-income
  – Minority groups
• Healthy eating behaviors reduces risk of childhood obesity
  – FV consumption

\(^1\)Ogden, Carroll, Curtin, Lamb, & Flegal, 2010
Background

- Large numbers of 3-5 year olds spending large amount of time with preschool\(^1\)
  - Teachers oversee mealtimes, thus FV consumption

Our long-term goal:

- Develop nutrition education materials for teachers to help get preschoolers to eat more FV, using the Information-Motivation-Behavioral Skills (IMB) model

\(^1\)Iruka & Carver, 2006
Information-Motivation-Behavioral Skills (IMB) Model

Information → Behavioral Skills → Behavior → Health Outcome

Motivation → Information

Fisher & Fisher, 1992
Research Question

What are Head Start (HS) teachers' perceptions related to increasing preschool children’s FV consumption?
METHODS
Methods - Qualitative Examination

• **Sample Size**
  – n=28 from 6 HS sites in NC
  – Theoretical Saturation

• **Inclusion criteria**
  – Working with 3-5 year olds
  – Over the age of 18
  – Present with children during mealtimes
Methods

- **Tool Development: Interview Guide**
  - Research Team
  - Standardized, Open-ended Questions
    - Unbiased/ Non-judgmental

- **Data Collector Training**
  - Ethics
  - Basic Qualitative Methods
  - Mock Interview with Feedback
## Main Questions in the Interview Guide

<table>
<thead>
<tr>
<th>Topic</th>
<th>Questions</th>
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| **Motivators** | • What are some reasons why you would want preschoolers to eat fruits and veggies?  
• Can you tell me what are some reasons why you or someone wouldn’t want preschoolers to eat fruits and veggies?  
• When you're trying to get preschoolers to eat fruits and veggies, how does it make you feel? |
| **Barriers**   | • What are some challenges to getting preschoolers to eat fruits and veggies?                                                              |
| **Facilitators** | • How do you get preschoolers to eat fruits and veggies?  
• What are some tricks/strategies/tactics/rules that teachers should or should not use to get their child to eat fruits and veggies?  
• If you could have anything at all to help you get preschoolers to eat fruits and veggies, what are things you might need?  
• What are things you might want to learn about to get preschoolers to eat fruits and veggies?  
• If any, what are some things you might want to know how to do to get preschoolers to eat fruits and veggies? |
Methods - Analysis

- Initial Analysis
  - Theoretical Saturation
- Verbatim Transcription
- Coding
  - Coding Manual
  - Two Coders
  - Inter-rater Reliability: .76-.88
  - QSR NVivo
- Theming & Application to IMB Model
Methods – Improving Trustworthiness

- Standardized Interview Guide
- Interviewer Training
- Summarizing Responses at End of Interview
- Inter-rater Reliability
RESULTS
Participant Demographics (n=28)

• **Age** (mean ± S.D.)
  – 35.6 ± 10.6 years old

• **Work experience** (mean ± S.D.)
  – 7.5 ± 6.3 years

• **Education**
  – 61%: 4-year college, university degree or advanced degree

• **Race**
  – 61%: Black or African American
  – 29%: White
  – 11%: Other
Dominant Emergent Themes:

IMB Model

- Information
- Motivation
- Behavioral Skills
- Behavior
- Health Outcome
Information

• Knew basic information:
  – Food
  – Health outcomes
  – Incorrect information

• What they want and need:
  – More details

“...how the fruits and vegetables can be good for their body health, I want to learn more about that.”
Motivation

1) Parent at school
2) Child factors
3) Parents and peers
Motivation: (1) Parent at school

“They (are) with me 8:30 until 2:30, and they need some type (of) vegetables or fruits in their body to keep them going through the day.”

Parent at home

Parent at school
Motivation: (2) Child Factors

• Child’s rejection
  • Texture (e.g., mushy FV)
  • Appearance of FV (e.g., black spots on bananas)
  • Without obvious reasons

• Child’s negative physical outcomes
  • Child’s allergy reaction to certain types of FV

"Just one kid, if there is something he doesn’t like, he tells me he doesn’t like peaches and I ask him if he’s sure, he says yes, he already did. Then I don’t really know what to say.

“I have one child who [is] allergic to strawberries.”
Motivation: (3) Parents and Peers

• Parents’ lack of support
  • Children are not exposed to FV
    • Their parents do not eat FV

• Peers
  • Positive and Negative Impact

“Challenges are sometimes [that parents] won’t eat [with] [their children] at home. Their families won’t eat [FV]. It’s something new that’s being introduced to them, so trying to get them to at least try it. That’s a major challenge.”

“…one of their peers says ‘I don’t like that!’ and the next one will say, ‘I don’t like that either!’ It’s a snowball effect.”
Behavioral Skills

Information

Behavioral Skills

Motivation

Behavior

Health Outcome
Behavioral Skills

1) Ways to encourage children to eat FV

2) Self-efficacy
Behavioral Skills:
(1) Ways to encourage children to eat FV

• Conditional reward or punishment statements:
  • *If you eat A (or clean your plate), then you can get B (e.g., seconds, sticker)*”
  • *If you do not eat A, you cannot get B*

• Role modeling strategies
  • Being a role model by sitting at the table and eating the same food with children

  “...I told him he couldn’t have more of the fruit until he tried the vegetable. And he ate the whole thing, because he ended up liking it. So that’s always encouraging.”
Behavioral Skills: (2) Self-efficacy

- Reported uncertainty about appropriate ways
- Wanted to know additional strategies

“And sometimes... I cannot get [the children] to [eat FV]. So I would like to learn ways... how to encourage children to eat fruits and vegetables when they're stubborn...”

“I’m trying to encourage them... there is a fine line... if you push too hard... depending on the child, they may not be accepting of that...”
DISCUSSION
Discussions

• Teachers were seemed to be aware of:
  – The importance of getting preschoolers to eat FV;\textsuperscript{1,2}
  – The health benefits of consuming FV.

• Teachers mentioned they need more FV-related information.

\textsuperscript{1}Tucker, Irwin, He, Bouck, & Pollett, 2006
\textsuperscript{2}Shriver, Hildebrand, & Austin, 2010
Discussion

• Challenges at the child, parent, and peer level\(^1\)

• Mixed message sent through different feeding strategies
  – Recommended: Sitting and eating the same food with children\(^2\)
  – Discouraged: Conditional reward and punishment statements\(^3\)

\(^1\)Needham, Dwyer, Randall-Simpson, & Heeney, 2007
\(^2\)Benjamin Neelon & Briley, 2011
\(^3\)Sigman-Grant, Christiansen, Fernandez, et al., 2011
Limitations

• Small Sample Size

• Generalizability

• Social Desirability Bias
Conclusions

• Use the constructs within IMB model to develop education materials/interventions
  – Health benefits of eating FV
  – Daily serving size for preschoolers
  – Various strategies to get young children to eat FV

• Target teachers, parents, and preschoolers
QUESTIONS
Literature Cited


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