EFNEP YOUTH QUEST: IMPACT ASSESSMENT TOOL

Development Issues and Lessons Learned

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Measures must be:
- Valid
- Reliable
- Appropriate
HOW WE TELL THE STORY?
How a child responds an evaluation questionnaire in 15-20 minutes is one of our primary ways to assess the child’s current situation and to demonstrate the impact of Youth EFNEP...
THERE IS NO MAGIC OR STANDARD RECIPE TO DESIGN QUESTIONNAIRES
“INGREDIENTS” & PROCEDURES USED IN EFNEP YOUTH QUEST RESEARCH PROJECT
RESEARCH GOAL

+ To develop a questionnaire for Youth EFNEP with the following characteristics.....
INGREDIENTS FOR A YOUTH EFNEP QUESTIONNAIRE

- Theory driven
- Content appropriate
- Age appropriate
- Appropriate for low-income audiences
- High validity
- High-acceptable reliability
- Practical and easy to respond and administer (20 min)
- Self-report
PROCEDURES FOR QUESTIONNAIRE DEVELOPMENT & TESTING

Conceptualization

Construction

Experts review

Pilot testing (Cognitive interviews)

Psychometric testing of revised questionnaire (factor analysis, reliability, predictive validity)

FINAL DRAFT READY ON SUMMER 2011
WHAT IS EFNEP YOUTH QUEST?

...is an impact assessment tool designed & tested for:

...Youth EFNEP participants in 3rd, 4th and 5th grade

... that includes psychosocial measures that could be modified by Youth EFNEP interventions.
Critical to focus on one age-group at the time (cognitive-development issues)

This grade group is aligned to one of the grade spans of the National Health Education Standards

3rd, 4th and 5th graders are considered developmentally appropriate to answer a self-report questionnaire.
*Based on Social Cognitive Theory, adapted from the Community Nutrition Logic Model

**WHY PSYCHOSOCIAL MEASURES?**

**Activities**
- Series of nutrition education lessons

**Factors influencing behavior (psychosocial mediators)**
- Increased:
  - Perceived benefits
  - Knowledge
  - Self-efficacy
  - Intentions

**Behavior**
- Improved:
  - Dietary practices
  - Physical Activity
  - Food choices
  - Food Safety

**Reduced Risk of:**
- Childhood Obesity

**EVALUATION**
- Process
- Impact/Effects
After a content analysis of multiple Youth EFNEP curricula, experts review (n=6) and a pilot-cognitive testing (n=14), EFNEP Youth Quest was organized as follows...
**HOW IS EFNEP YOUTH QUEST ORGANIZED?**

+ **3 core areas:** Nutrition, Physical Activity and Food Safety.

+ **Key measures:** Intentions, Self-efficacy, Perceived Benefits and Knowledge.

+ **Key topics:** Eating breakfast, My Pyramid Food Groups, Reading Food Labels, Choosing Healthy Foods/Beverages instead of Unhealthy Food/Beverages Options, Fight Bac Rules, Ways to improve Physical Activity.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Perceived benefits</td>
<td>Eating a variety of foods, Breakfast, Fruits and vegetables, Dairy</td>
<td>-Physical activity</td>
<td>--</td>
</tr>
<tr>
<td>Knowledge</td>
<td>My Pyramid food groups and recommended daily intake</td>
<td>--</td>
<td>-Fight Bac rules</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>-Choose or ask for: whole grains, low-fat-sugar foods, more fruits and vegetables -Skills to read food labels</td>
<td>-Ways to increase PA</td>
<td>-To enhance skills related to food safety practices</td>
</tr>
<tr>
<td>Intentions</td>
<td>-Intentions to choose whole grain foods, lean meats, low-fat calcium products, low-fat-sugar foods/beverages</td>
<td>-Intention to become more active during free time</td>
<td>--</td>
</tr>
</tbody>
</table>
Questions: based/adapted from existing questionnaires.

Response formats: 4-Point Multiple Choice, Paired-Choose Format, 3-Point Ordered

Length format: Rule of thumb - long enough to ensure reliability and short enough to avoid respondent burden (at least three items/measure)

Total questions without factor analysis: 58 items

Time for completion: about 20 minutes
SAMPLE OF QUESTIONNAIRE FORMAT AFTER COGNITIVE TESTING (n=14)

+ SELF-EFFICACY

Section E

Directions: Choose one. How sure are YOU that you CAN successfully do the following?

<table>
<thead>
<tr>
<th>Questions</th>
<th>Not sure I CAN</th>
<th>A little bit sure I CAN</th>
<th>Sure I CAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>31. CAN get my parents to find a place where I can be physically active</td>
<td>Not sure I CAN</td>
<td>A little bit sure I CAN</td>
<td>Sure I CAN</td>
</tr>
<tr>
<td>32. CAN get my parents to do physical activity or sports with me</td>
<td>Not sure I CAN</td>
<td>A little bit sure I CAN</td>
<td>Sure I CAN</td>
</tr>
<tr>
<td>33. I CAN be physically active no matter how old I am</td>
<td>Not sure I CAN</td>
<td>A little bit sure I CAN</td>
<td>Sure I CAN</td>
</tr>
</tbody>
</table>

I CAN play even if it is hot or cold outside

Section A

Directions: Choose one. Of the five foods which one would YOU pick if YOU had to choose just one.

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Which one would you pick if you are in a hurry?</td>
<td>Can of soda</td>
</tr>
<tr>
<td>2. Which bread would you choose for a sandwich?</td>
<td>White bread</td>
</tr>
<tr>
<td>3. Which one would you use for a special occasion?</td>
<td>White bread</td>
</tr>
</tbody>
</table>

Which one would you pick to drink?

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Which fruit would you eat if you were hungry to buy?</td>
<td>Bag of fruits (e.g., oranges, bananas, peaches)</td>
</tr>
</tbody>
</table>
| 5. Which one would you order at a fast food restaurant?                 | Whole milk | Low fat fat
tomato milk |

I can also continue to next page.
HOW WAS EFNEP YOUTH QUEST TESTED?

+ IRB Clemson University Approval
+ Recruitment: Minimum 290 participants (ratio 5 participants per question)
+ Selection criteria:
  - Low-income (SNAP-eligible schools)
  - Ethnically diverse children
  - In 3^{rd}, 4^{th} and 5^{th} grade
  - With parent’s consent and assent form
+ Location: 6 counties at SC and 1 county at NC
## Participants' Demographics Characteristics (n=454)

<table>
<thead>
<tr>
<th>ETHNIC/RACE</th>
<th>% OF CHILDREN (n=454)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or Caucasians</td>
<td>47.4</td>
</tr>
<tr>
<td>Blacks or African Americans</td>
<td>37.9</td>
</tr>
<tr>
<td>Hispanics</td>
<td>10.9</td>
</tr>
<tr>
<td>Other</td>
<td>3.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRADES</th>
<th>% OF CHILDREN (n=454)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third grade</td>
<td>35.8</td>
</tr>
<tr>
<td>Fourth grade</td>
<td>33.8</td>
</tr>
<tr>
<td>Fifth grade</td>
<td>30.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GENDER</th>
<th>% OF CHILDREN (n=454)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>50.6</td>
</tr>
<tr>
<td>Girls</td>
<td>49.4</td>
</tr>
</tbody>
</table>
Advisory committee: EFNEP leaders, nutrition, physical activity, public health, psychology and education experts.

- One nutrition PhD candidate
- Three nutrition masters’ students
- 10 Clemson University nutrition undergraduate students**
HOW WAS EFNEP YOUTH QUEST TESTED?

1. Cognitive Testing
2. Factor analysis, internal consistency
3. Predictive Validity
4. Test-retest reliability
You can receive:
A bottle of water or a decorative lunch bag with two or more of the following things: bookmarks, notepads, erasers, magnets, rulers, magnets, puzzles, door hanger, pens, pencils, etc.
LESSONS LEARNED
TOP 5 DEVELOPMENT LESSONS

+ Theory provides a roadmap to prioritize the questionnaire’s measures
+ Content analysis and experts review are excellent tools to ensure the content validity of the questionnaire.
+ Length of the questionnaire matters. Not too short (reliability) and not too long (response burden)
+ To maximize age-appropriateness is crucial to: focus on an age group at the time, do cognitive testing and be creative.
+ Questionnaires have to take into account the reality of the audience (low-income)
TOP 3 TESTING LESSONS

+ To maximize reliability and validity select a large and ethnically diverse sample from the targeted population (good practice at least 5 participants per item)

+ Get into the schools is difficult. Therefore, work with community partners and always keep a positive attitude.

+ Joint efforts between advisory committee, graduate and undergraduate students was fundamental to complete this process with success.
For funding:
- Dr. Katherine Cason to provide me the opportunity and funding to study in Clemson University
- Clemson University Creative Inquiry Initiative
- Costa Rica-CONICIT-MICIT Fellowship

Collaborators:
- Advisory committee: Katherine Cason, PhD, RD, LD; Joel Williams, MPH, PhD; Sarah Griffin MPH, PhD; Aubrey Coffee, PhD; Susan Baker, EdD; Maria Mercedes Rossi, MS; and Joanne Brosh PhD.
- Recruitment Team: Tarana Khan, Kristen Welch, Patsy Smith, Sandra Blankenship, Arelis Moore, Debheror Walker, Trevor Boggs, Nichole Bulow, Susan Haury, Jonathan Pitts.
- Data Collection Team: Ginger Thomas, Victoria Hayden, Trisha Hall, Melissa Ikerd, Hannah Clark, Amelia Gannon, Kathryn Lybrand, Laura Johnson, Mariam Roshua, Katherine Canconca, Maciel Ugalde, Catalina Aragon and Jermaine Shaw.
- Graphic designer: Lori Frager
- Clemson University Youth Learning Institute: Zest Quest and Youth EFNEP
THANK YOU!

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