

COOPERATIVE
EXTENSION



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**2017 National Coordinators'
Conference**





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Conference**

**Food and Physical
Activity Behaviors
Questionnaire**



- Susan Baker, Colorado State University
- Karen Barale, Washington State University
- Deb Palmer-Keenan, Rutgers University
- Karen Franck, University of Tennessee
- Garry Auld, Colorado State University



Quality Evaluation

- Measures outcomes
- Determines if a program works
- Justifies program
- Requires tested tools



New Guideline

- Eat a variety of vegetables from all of the subgroups—dark green, red and orange, legumes (beans and peas), starchy, and other
- Consume less than 10 percent of calories per day from added sugars



New Guideline

- Adults should do at least 150 minutes a week of moderate-intensity, or 75 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination.



Why do we need a new tool?

- New research findings
- 2015 Dietary guidelines
- 2008 Physical Activity guidelines



Development Process

- Work over the past 8 years
- Domains/Core Areas
 - Nutrition (NC2169 Multistate Project)
 - Food Resource Management (FRM Workgroup)
 - Food Safety, Food Security, Physical Activity (Behavior Checklist Workgroup)



Content Analysis

- Confirm content or identify missing content as compared with national program guidelines or expert recommendations.
- 3 most widely used:
 - Eating Smart • Being Active (Colorado)
 - EFNEP Families Eating Smart and Moving More (North Carolina)
 - Healthy Food, Healthy Families (Texas)



Face Validity

- Measures if the participant understands the question in the same way and as it is intended
- Tested by cognitive interviews

Reliability and Validity?

- Reliability = consistency
- Validity means the questions asked measure the thing you are trying to measure.



Reliability and Validity?

- Reliability is tested first because:
 - You CAN have questions that are reliable but not valid; but,
 - You CAN'T have questions that are valid unless they are reliable.

Two important types of reliability to test

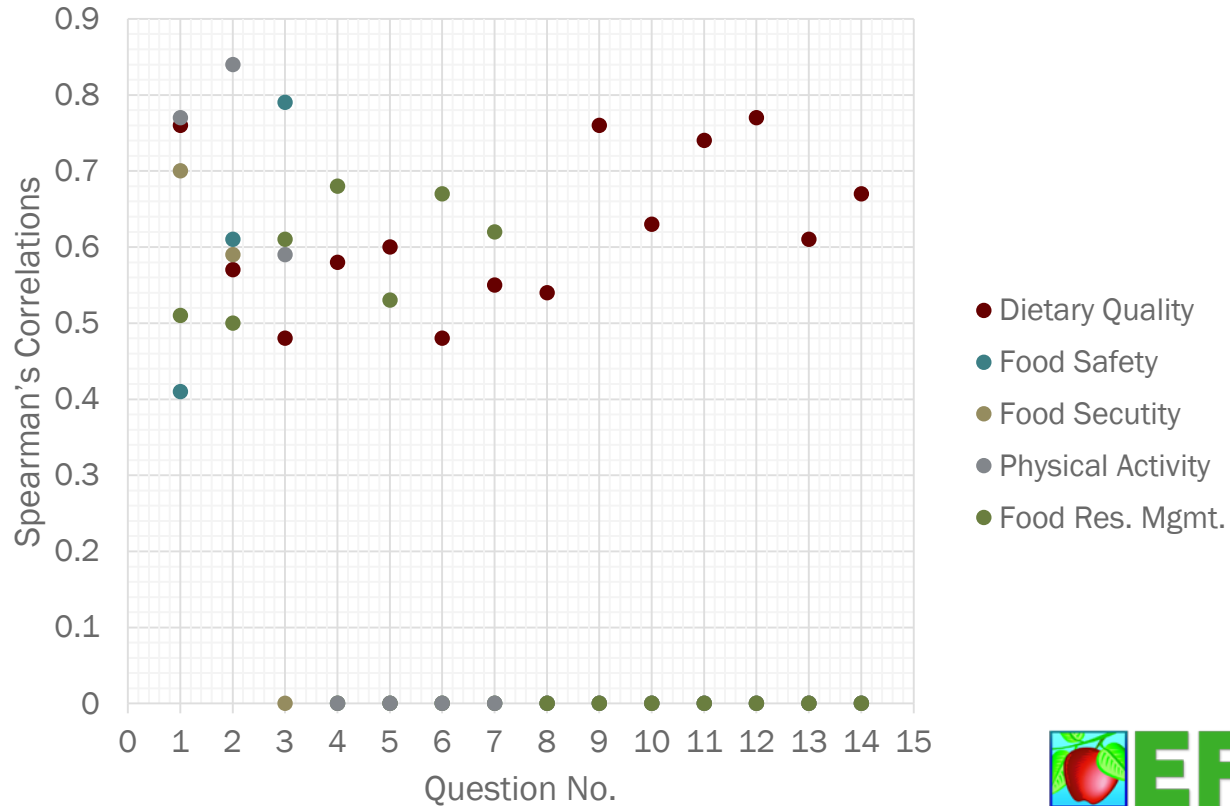


Reliability over Time

- Do you answer questions the same way each time someone asks you?
- If you do, in research we say the questions are reliable over time.

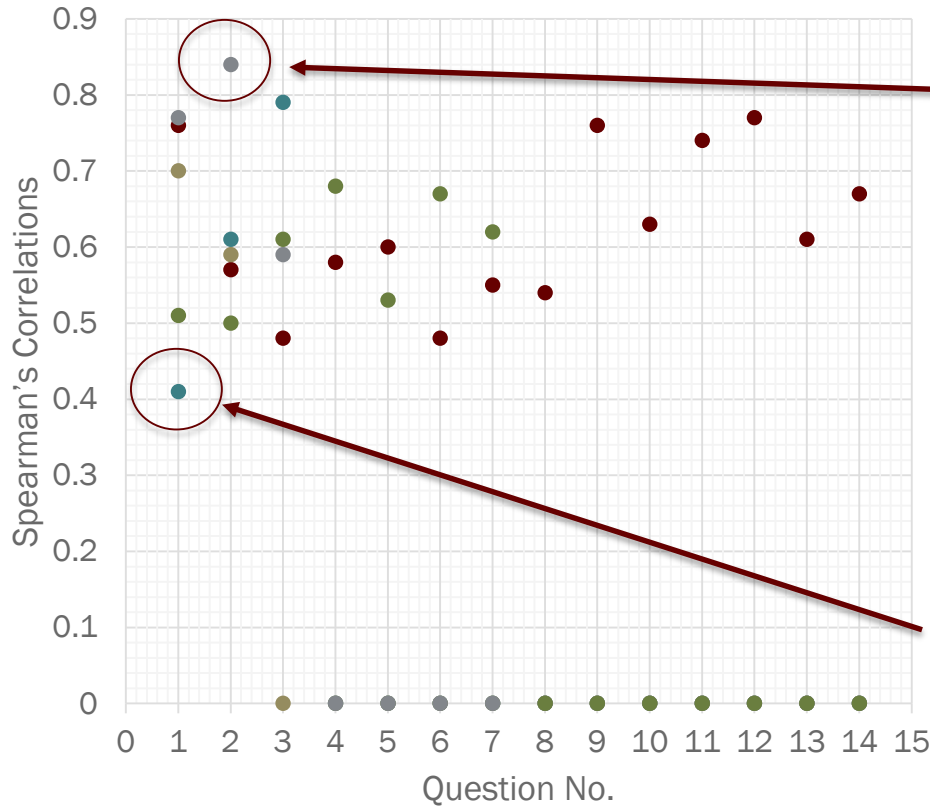


Test-Re-Test Reliability



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Test-Re-Test Reliability



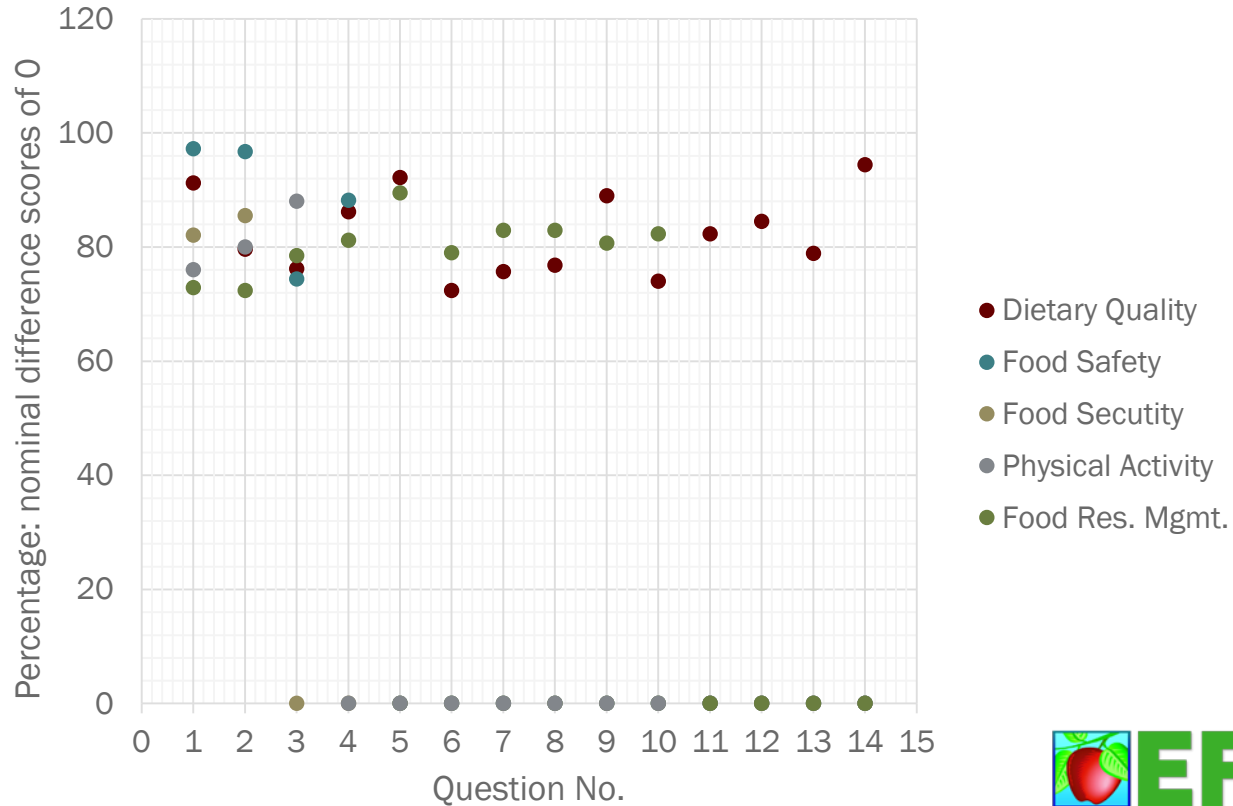
This one did REALLY well!

This one not so much
(but it's still pretty good).



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Another Way to Look at the Same Data



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Internal Consistency

	Number of People Tested	Number of Items	Chronbach's Alpha
Dietary Quality	181	14	0.68
Food Safety	181	4	0.40
Food Security	181	2	NA
Physical Activity	85	3	0.58
Food Resource Management	181	10	0.79



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Criterion/Construct Validity

- Criterion
 - I exercise 150 minutes per week vs. accelerometer data
- Construct
 - I use a meat thermometer to check the temperature of meat vs. observed behavior during cooking demonstration



Criterion/Construct Validity Testing

All domains completed by December 2017.

- Food Security = USDA Household Food Security Questionnaire
- Nutrition = Dietary recall
- Physical Activity = Accelerometers
- Food Resource Management = Participant interviews
- Food Safety = Participant food preparation observations



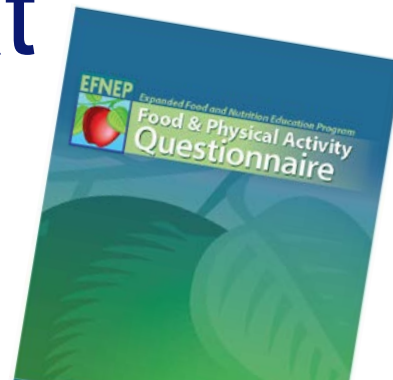
Survey Format

- September 2017
- Access information sent via listserv
- Team members
 - Catalina Aragon
 - Kate Yerxa
 - Karen Barale



Survey Format

- Standardized layout
- Ability to add state logos and contact information
- In color or gray scale



<p>1. How many days a week do you cook dinner (your main meal) at home?</p> <p><input type="checkbox"/> 1 rarely cook dinner at home</p> <p><input type="checkbox"/> 1 day a week</p> <p><input type="checkbox"/> 2 days a week</p> <p><input type="checkbox"/> 3 days a week</p> <p><input type="checkbox"/> 4 days a week</p> <p><input type="checkbox"/> 5 days a week</p> <p><input type="checkbox"/> 6 or 7 days a week</p>	<p>4. How many times a day do you eat vegetables?</p> <p><i>Examples of vegetables are green salad, corn, green beans, carrots, potatoes, grains, and squash. Include fresh, canned and frozen vegetables. DO NOT COUNT ranch dress, potato chips or rice.</i></p> <p><input type="checkbox"/> 1 rarely eat vegetables</p> <p><input type="checkbox"/> Less than 1 time a day (a couple times a week)</p> <p><input type="checkbox"/> 1 time a day</p> <p><input type="checkbox"/> 2 times a day</p> <p><input type="checkbox"/> 3 times a day</p> <p><input type="checkbox"/> 4 or more times a day</p>
<p>2. How many days a week do you eat meals prepared outside of your home?</p> <p><i>Include fast food, restaurants, ready-to-eat food from grocery stores, and food from gas stations or corner stores.</i></p> <p><input type="checkbox"/> 1 rarely eat meals prepared outside of my home</p> <p><input type="checkbox"/> 1 day a week</p> <p><input type="checkbox"/> 2 days a week</p> <p><input type="checkbox"/> 3 days a week</p> <p><input type="checkbox"/> 4 days a week</p> <p><input type="checkbox"/> 5 days a week</p> <p><input type="checkbox"/> 6 or 7 days a week</p>	<p>5. How many different kinds of vegetables do you usually eat a day?</p> <p><i>Examples of vegetables are green salad, corn, green beans, carrots, potatoes, grains, and squash. Include fresh, canned and frozen vegetables. DO NOT COUNT ranch dress, potato chips or rice.</i></p> <p><input type="checkbox"/> 1 rarely eat vegetables</p> <p><input type="checkbox"/> 1 time a day</p> <p><input type="checkbox"/> 2 times a day</p> <p><input type="checkbox"/> 3 times a day</p> <p><input type="checkbox"/> 4 or more times a day</p>



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Spanish Translation

- September 2017
- Deb Palmer-Keenan & Rutgers team to develop
 - Input from different ethnicities to provide translation that will meet the needs of different groups (Mexican, Cuban, Puerto Rican, etc.)



Final Reliability Testing

2018

- Test/retest reliability



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Future Steps

- Testing of Spanish translation
- Continued revisions as DGA is revised



Question Set

20 QUESTIONS– A DRAFT of the revised, scientifically tested Adult Behavior Checklist questions are shown below by core area. These questions will be used by the Expanded Food and Nutrition Education Program starting October 1, 2017.

Diet Quality (DQ) (n=6)

Circle the response that best describes how you usually do things								
1) How many times a day do you eat fruit? Examples of fruits are apples, bananas, oranges, grapes, raisins, melon and berries. Include fresh, frozen, dried, or canned fruit. <u>Do not include juice.</u>	I rarely eat fruit	Less than 1 time a day (a couple times a week)	1 time a day	2 times a day	3 times a day	4 or more times a day		
2) How many times a day do you eat vegetables? Examples of vegetables are green salad, corn, green beans, carrots, potatoes, greens, and squash. Include fresh, canned and frozen vegetables. <u>Do not count french fries, potato chips, or rice.</u>	I rarely eat vegetables	Less than 1 time a day (a couple of times a week)	1 time a day	2 times a day	3 times a day	4 or more times a day		
3) Over the last week, how many days did you eat red and orange vegetables?	I did not eat red and orange vegetables	1 day a week	2 days a week	3 days a week	4 days a week	5 days a week	6 or 7 days a week	

Conclusions

- EFNEP...
- ...USDA's Flagship program
- ...Largest direct nutrition education program
 - Almost 4 million adult participants since 1968



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- **EFNEP 50th Anniversary!!!!**
- Would be a very good time to strengthen the evidence base



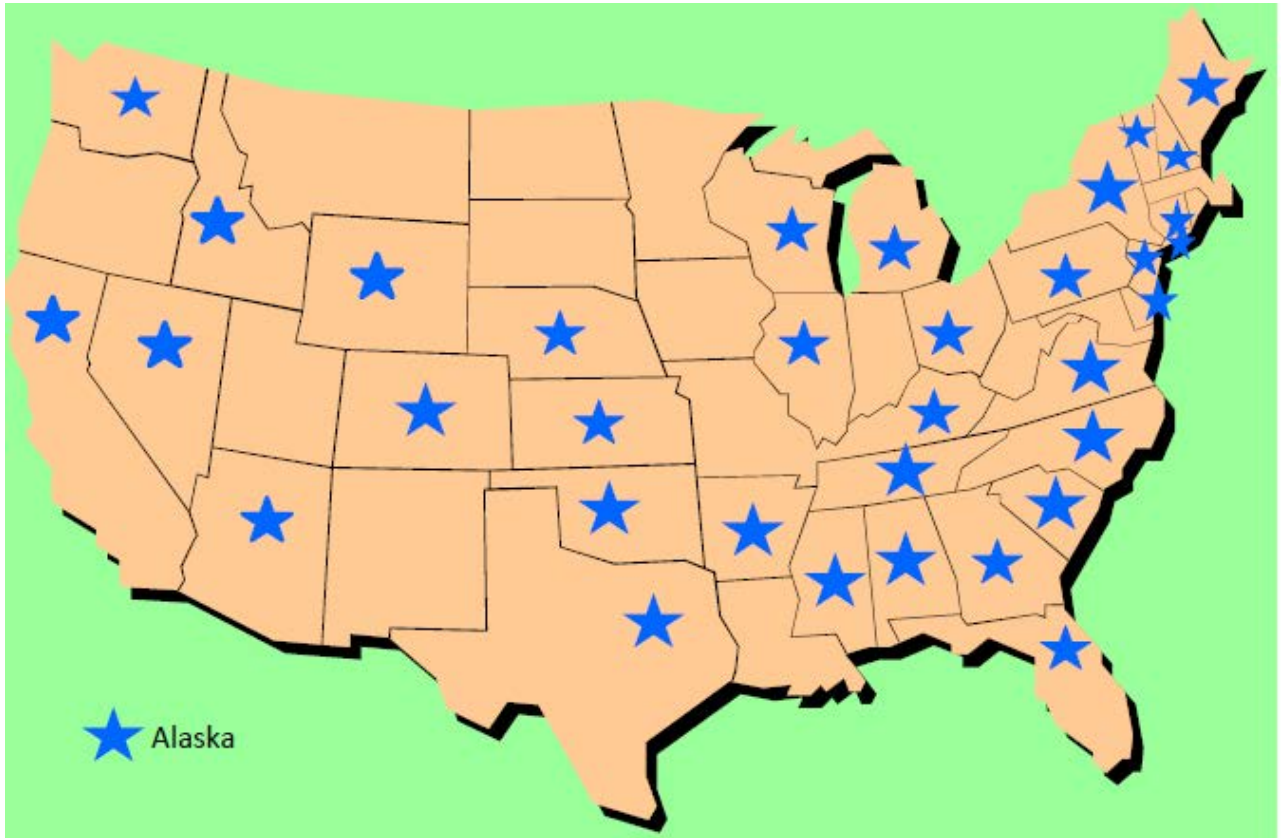
- We might all **“KNOW”** EFNEP makes positive impacts on participants and educators, **BUT**
- Evidence not as strong as it could or should be



Remind you that...

- Come October, you'll be using a new tool
- New tool more extensively tested than current BCL
- Content reflects 2015 DGA, including physical activity, and the most current research on food safety, FRM, food security



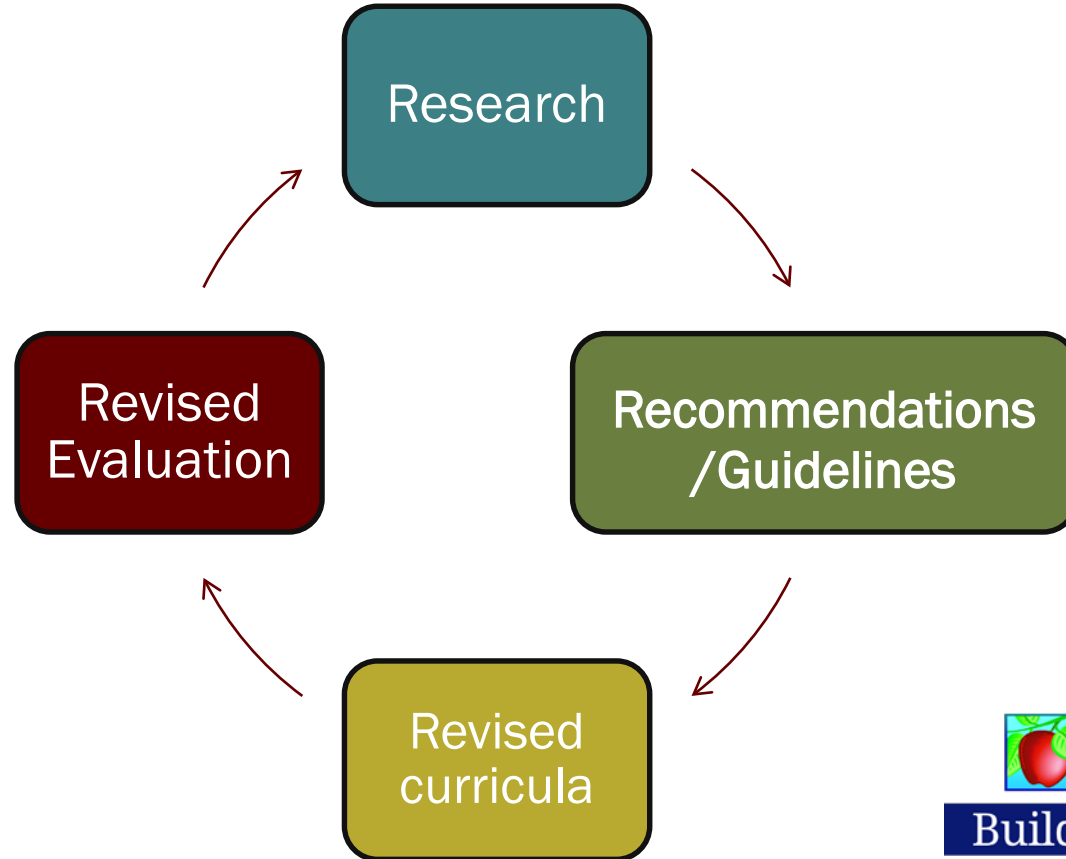


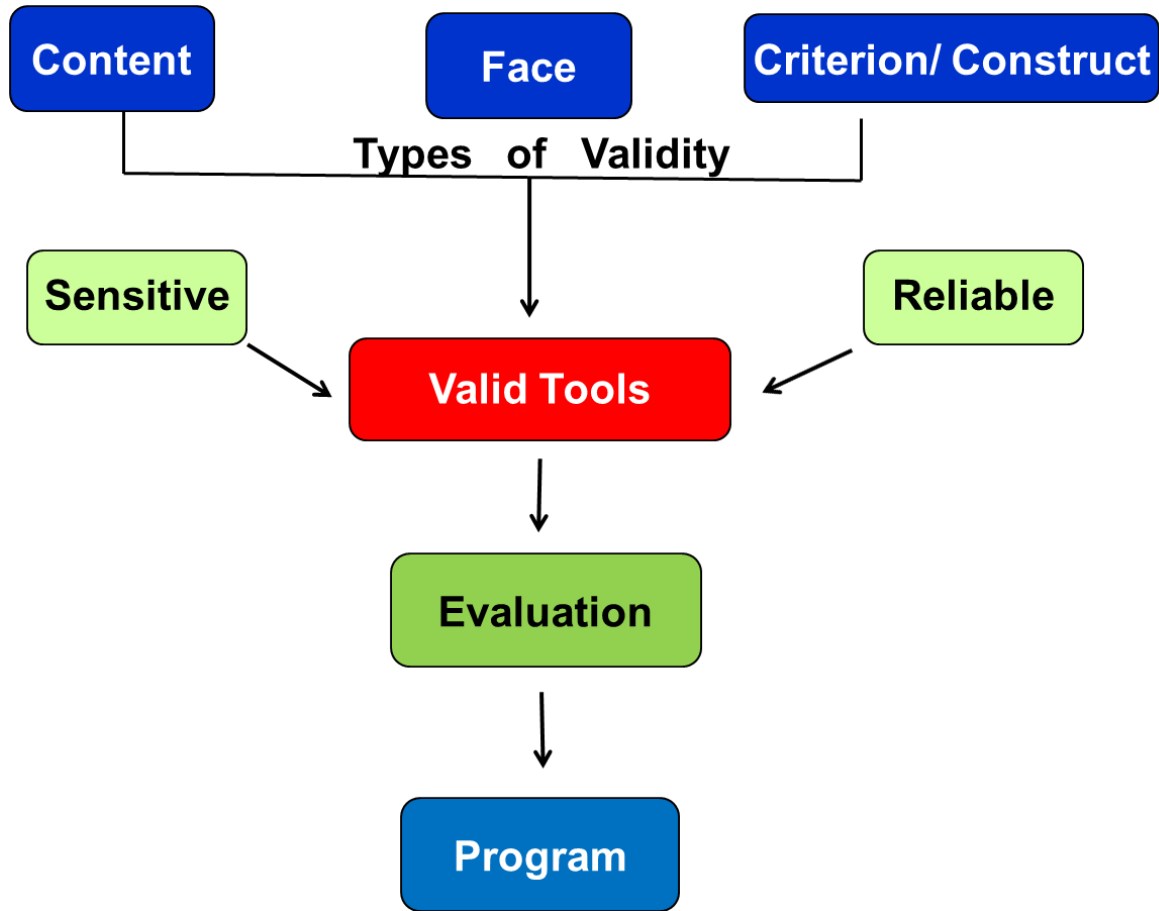
Tested with EFNEP's 3 primary racial/ethnic groups & in all geographic regions



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Evaluation not STATIC





Literature helps establish the evidence base!

- Murray, E., Baker, S., Auld, G. (in press). Nutrition recommendations from the US Dietary Guidelines critical to teach low-income adults: Expert panel opinion. J Academy of Nutrition and Dietetics.
- Gills, S., Baker, S., Auld, G. (in press). Collection methods for the 24-hour dietary recall as used in the Expanded Food and Nutrition Education Program. J Nutrition Education and Behavior.
- Auld, G., Baker, S., Infante, N., Inglis-Widrick, R., Procter, SB., Steger, MF., Yerxa, K. (2016) EFNEP's impact on exemplary educators' Quality of Life. J Nutrition Education and Behavior, 48:647-654.
- Murray, E., Auld, G., Inglis-Widrick, R., Baker, S. (2015) Nutrition content in a national nutrition education program for low-income adults: Content Analysis and comparison to the U.S. Dietary Guidelines. J Nutrition Education and Behavior, 47:566-573.



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Literature helps establish the evidence base!

- Koszewski, W.M., Hlavacek, M., Yerza, K., Procter, S.B., Auld, G., Baker, S., Misner, S. (2014) Positive Quality of Life factors identified from EFNEP participant stories. J. Extension 52(4). Available at: <http://www.joe.org/joe/2014august/a7.php>.
- Auld, G., Baker, S., Bauer, L., Koszewski, W., Procter, S., Steger, M. (2013) EFNEP's Impact on the Quality of Life of its Participants and Educators. J Nutrition Education and Behavior, 45:482-489.
- Wardlaw M.K., Baker S. (2012). Long-term evaluation of EFNEP and SNAP-Ed. Forum for Family and Consumer Sciences. <http://www.ncsu.edu/ffci/publications/2012/v17-n2-2012-summer-fall/index-v17-n2-december-2012.php>



- Luick, BR, and Guenther, PM. (2014). The quality of diets reported by Expanded Food and Nutrition Education Program participants in the Mountain Region in 2011 when exiting the program was higher than when entering. FASEB Journal. 28:273.8.
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<http://ajl.sagepub.com/content/early/2015/10/01/1559827615607194.full.pdf+html>
- Guenther, P.M., Luick, B.R. (2015) Improved overall quality of diets reported by Expanded Food and Nutrition Education Program participants in the Mountain Region, Journal of Nutrition Education and Behavior 47:421-426.
- Auld, G., Baker, S., Conway, L., Dollahite, J., Lambia, M.C., McGirr, K. (2015). Outcome Effectiveness of a Widely Adopted EFNEP Curriculum. Journal of Nutrition Education and Behavior, 47:19-27.
- Cooper BR, Barale K, Funaiole A, Power TG, Combe A. (2016). Participant and Household Characteristics Associated with Graduation from the Expanded Food and Nutrition Education Program. Journal of Nutrition Education and Behavior, 48(7):453–460.e1.

Others being drafted or planned



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- When combining data across 76 programs, must have confidence that everyone is using the same tool and same data collection protocols!
- Given extensive testing, imperative that programs **DO NOT CHANGE** the **WORDING!**



- To improve programs, should strengthen best practices in all facets of program.
 - Design
 - Implementation
 - Training
 - Evaluation

1 Baker, S., et al. Best Practices in Nutrition Education for Low-Income Audiences (2014).
<http://snap.nal.usda.gov/snap/CSUBestPractices.pdf>



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Strong evaluation strengthens
the evidence base and helps
protect the program's future



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Current Researchers

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- Mary Kay Wardlaw
- Kate Yerxa
- Dave Weatherspou

Helen Chipman, Program Liaison



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Thank you!

- To researchers and programs who
 - Participated in research
 - Volunteered for data collection
 - National office



Questions

- Susan Baker
- Karen Barale
- Deb Palmer-Keenan
- Karen Franck
- Garry Auld

