

Final Outcomes of a Novel Food Insecurity Related Measurement Development Project

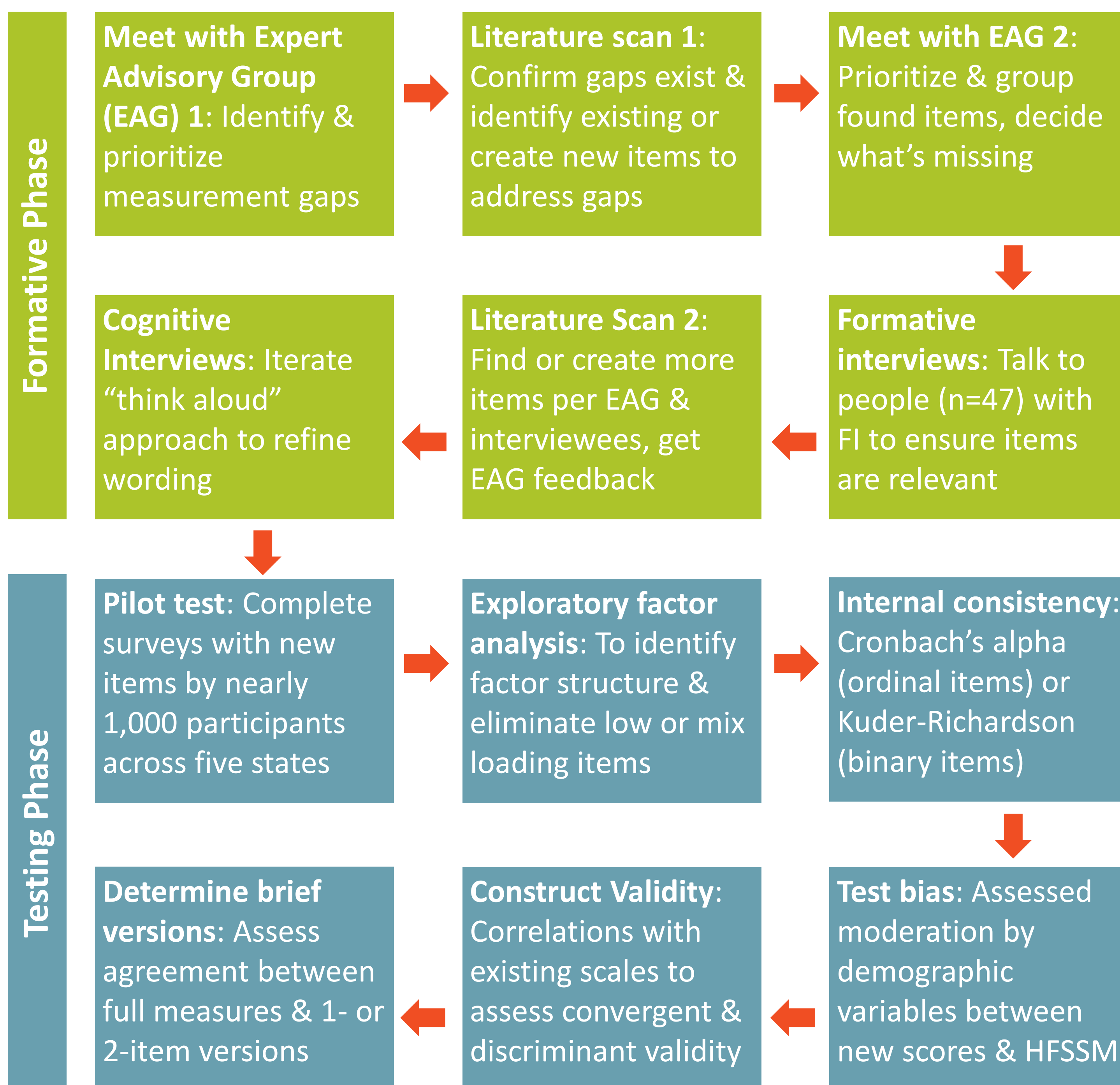
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Objective

Develop low-burden measures that are complementary to the USDA's Household Food Security Survey Module (HFSSM) and address critical measurement gaps related to food insecurity (FI) that are of interest to both practitioner and academic audiences.

Methods



Measurement Gaps Addressed (Continued)

Perceived Availability, Utilization, Stability

Measures of the household level perceptions of the other three pillars of food security.

- Perceived Limited Availability** – Perceived availability of quality fruits and vegetables, foods good for health and well-being, and preferred foods at food stores and food pantries.
- Utilization Barriers** – Tangible and intangible barriers to preparing healthful meals.
- Food Insecurity Stability** – Chronic, seasonal, intra-monthly, or intermittent food insecurity.

Nutrition Security & Dietary Choice

Measures of the household's ability to acquire foods that are good for their health and well-being, and to exercise choice over dietary characteristics

- Nutrition Security** – Ability of the household to acquire healthful foods.
- Healthfulness Choice** – Perceived lack of external barriers limiting the household's ability to consume healthful foods if they chose to do so.
- Dietary Choice** – Perceived lack of external barriers limiting the household's ability exercise choice over the characteristics of their diet.

Sample

Table 1. Selected sample characteristics for the analytic samples for the nutrition security and dietary choice measures¹

Sample Characteristics	Analytic Sample (n=380) ¹
Age (years)	Mean (SD) 44.9 (14.4)
Food pantry utilization (%)	75%
Women (%)	78%
Food Security (%)	High 17%
	Marginal 13%
	Low 30%
	Very Low 41%
Educational Attainment (%)	Less than high school 9%
	High school diploma or G.E.D. 33%
	Some college 27%
	Associates degree or greater 31%
Race or Ethnicity (%)	White, non-Hispanic 45%
	Latino/Hispanic 23%
	Black, non-Hispanic 18%
	Multi-racial/-ethnic, another 7%
	Asian, non-Hispanic 6%
	Tribal/Indigenous 1%

1: The table shows the demographic data for the analytic sample for the nutrition security and dietary choice measures. All new measures were piloted in the same sample. Due to differing missing values, sample sizes ranged from 220-445. Sample characteristics are similar across samples.

Results

- Nine new measures were created across three domains/gap areas
- Measures ranged from 3 to 18 items
- Brief one- or two-item versions were created for longer measures
- Internal consistency scores ranged from 0.70-0.95 (above acceptable threshold)
- Minimal to no test bias detected by age, race, gender, education, and test mode
- New measures showed convergent validity (See Tables 2-4 Below)

Table 2. Spearman's correlation coefficients for assessing convergent and discriminant validity of the new measures

	Food Security	General Health	CD-RISC Scores ^a	Financial Well-Being ^b	Financial Shock ^c
Absorptive Capacity (n=394)	0.550*	0.255*	0.231*	0.464*	-0.221*
Adaptive Capacity (n=325)	0.430*	0.320*	0.379*	0.474*	-0.253*
Transformative Capacity (n=220)	0.310*	0.288*	0.384*	0.401*	-0.307*

* = Statistically significant at the Bonferroni adjusted 0.0028 alpha level

a: Conner-Davidson Resilience Scale

b: Consumer Financial Protection Bureau's Financial Well-Being Scale

c: Self-report of having experienced a household financial shock (e.g., job loss) in the previous 12 months.

Table 3. Spearman's correlation coefficients for assessing convergent and discriminant validity of the new measures

	Food Insecurity ^A	General Health	Fruits and Vegetables	Scratch Meals	Fast Food Meals	Processed Meals
Chronic (n=445)	0.497*	-0.162*	-0.182*	-0.195*	-0.061	0.164*
Seasonal (n=445)	0.269*	-0.029	-0.114	-0.092	-0.001	-0.063
Intra-Monthly (n=445)	0.257*	-0.042	-0.058	-0.023	-0.016	0.009
Intermittent (n=445)	0.134	-0.039	-0.084	-0.094	0.001	0.075
Utilization Barriers (n=428)	0.484*	-0.195*	-0.258*	-0.273*	0.015	0.177*
Perceived Limited Availability, Stores (n=334)	0.342*	-0.167	-0.188*	-0.265*	0.106	0.166
Perceived Limited Availability, Pantries (n=249)	0.248*	-0.099	-0.052	-0.017	0.144	0.113

A: Scored as a 4-point ordinal variable based on increasing categories of food insecurity (i.e., 0 = "High food security" to 3 = "Very low food security")

* = Statistically significant at the Bonferroni adjusted 0.001 alpha level

Table 4. Spearman's correlation coefficients for assessing convergent and discriminant validity of the new measures (n=380)

	Food Security	General Health	Fruits and Veg.	Scratch Meals	Fast Food Meals	Processed Meals
Nutrition Security	0.651*	0.290*	0.278*	0.347*	0.003	-0.234*
Healthfulness Choice	0.401*	0.194*	0.240*	0.350*	-0.068	-0.162*
Dietary Choice	0.657*	0.261*	0.280*	0.328*	0.079	-0.202*

* = Statistically significant at the Bonferroni adjusted 0.00208 alpha level

Measurement Gaps Addressed

Household Resilience

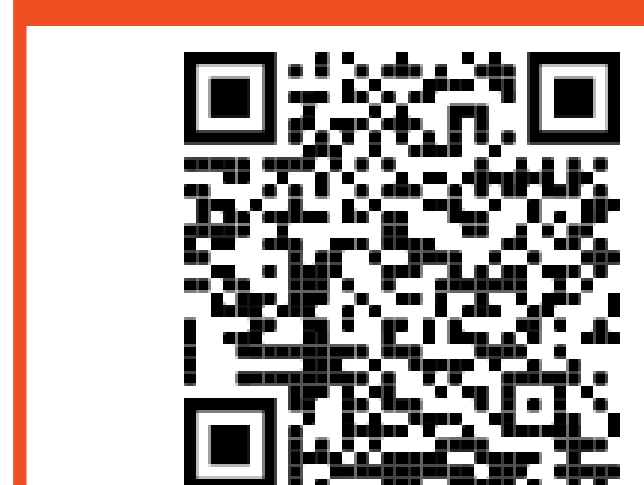
Measures of the factors that make a household resilient to household-level financial shocks (e.g., job loss, medical debt) that can increase risk for FI

- **Absorptive Capacity** – Assesses a household's short-term ability to buffer financial shocks. Items in the scale are related to financial wellbeing, income and housing stability, and household expense burden.
- **Adaptive Capacity** – Assesses a household's intermediate-term ability to respond to financial shocks by pivoting to alternative livelihood approaches. Items in the scale are related to financial efficacy, social support, job, and assistance barriers.
- **Transformative Capacity** – Assesses community-level factors that impact a household's long-term ability to modify their resilience to financial shocks. Items in the scale are related to job availability, resources/services, infrastructure, social cohesion, and long-term outlook.

Conclusions & Additional Resources

The findings support the reliability and construct validity of these new measures. These measures may be used in various applications to promote a more comprehensive understanding of the FI experience and can help inform novel intervention approaches to address food insecurity more fully.

Nutrition Security & Dietary Choice paper in *Appetite*



Link to the website for measures and guidance

