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**Using cognitive pretesting to improve the Women's Empowerment in Agriculture Index survey**

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**Selected Poster prepared for presentation at the  
2015 Agricultural & Applied Economics Association and Western Agricultural Economics  
Association Joint Annual Meeting, San Francisco, CA, July 26-28.**

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# Using cognitive pretesting to improve the Women's Empowerment in Agriculture Index survey

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## What is the WEAI?

- The Women's Empowerment in Agriculture Index (WEAI) is the first comprehensive and standardized survey-based measure to directly capture women's empowerment and inclusion levels in the agricultural sector.
- Collects individual-level data from primary male and primary female decisionmakers within the same households
- Measures extent of individual's engagement in the agriculture sector in 5 domains (production, resources, income, leadership, and time), as measured by 10 indicators (Alkire et al. 2013).
- Initially designed as a monitoring and evaluation tool for the USAID Feed the Future Initiative. From 2012 - 2013 it was collected as part of the baseline survey in 19 countries.

## What is cognitive pretesting?

- A qualitative field research method that is paired with a (quantitative) survey.
- The purpose is to systematically identify and analyze sources of response error in surveys and use that information to improve the quality and accuracy of survey instruments (Johnson 2015).
- Generally conducted as a pre-test before full field work begins; especially important to conduct with new or revised instruments and those used in diverse cultural and linguistic contexts (Willis 2005; Johnson 2014).
- It helps to identify the stage in the cognitive process where response error occurs.

Table 1 – Stages of cognition

Cognitive stage	Cognitive stage definition	Problems	Causes
Comprehension	Respondent interprets the question	Respondent doesn't understand	Unknown terms, ambiguous concepts, long and too complex
Retrieval	Respondent searches memory for relevant information	Respondent doesn't know/remember	Recall difficulty, questions assume respondent has information
Judgement	Respondent evaluates and/or estimates response	Respondent doesn't want to tell, can't tell	Biased or sensitive, estimation difficulty
Response	Respondent provides information in the format requested	Respondent can't respond in the format requested	Incomplete response options, multiple responses necessary

Source: Johnson, 2014

**Original Q:** "Did you yourself participate in [ACTIVITY] in the past 12 months (that is, during the last [one/two] cropping seasons)?"

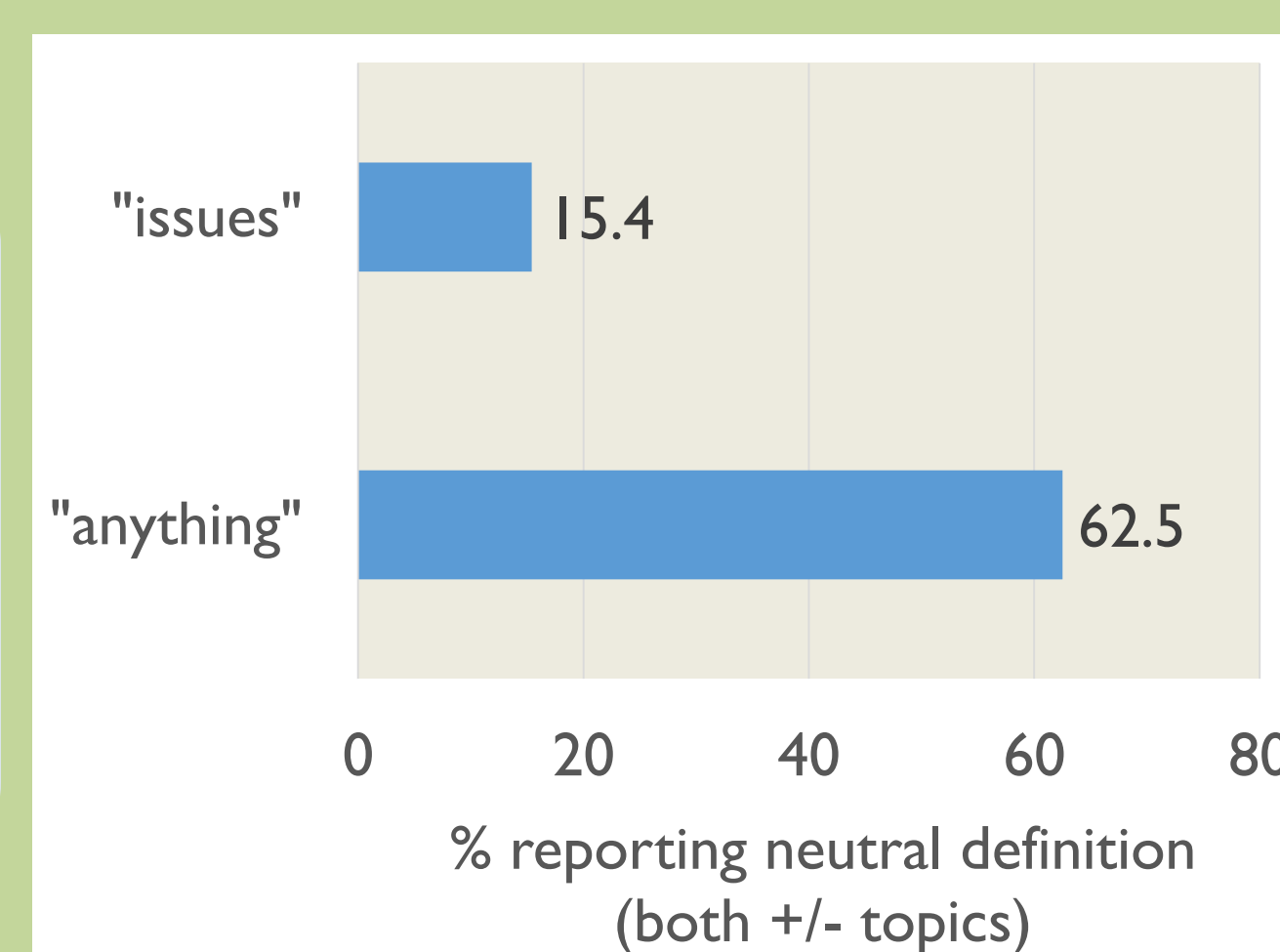
**35% of respondents in Uganda either could not come up with the recall period used or referred to a timeframe other than 12 months.**

**New Q:** "Did you yourself participate in [ACTIVITY] in the past 12 months (that is, during the last [one/two] cropping seasons), from [PRESENT MONTH] last year to [PRESENT MONTH] this year?"

**Timeframe recall errors drop from 35% to 6% in Uganda.**

Figure 2 – Speaking in public definition: Comparison of "issues" and "anything" in Uganda

"Do you feel comfortable speaking up in public about any issue/anything that is important to you, your family or your community?"



## Why is the WEAI an ideal candidate for cognitive testing?

- The original WEAI had some problematic indicators so a second version of the WEAI was developed with new questions; needed to test whether these changes had the intended effects of improving the instrument and clarifying questions.
- The WEAI is meant to be implemented in a standard manner across countries with diverse cultural contexts; must ensure that questions are worded so they are interpreted the same regardless of context.
- Cognitive testing used as a method to test the survey's validity.



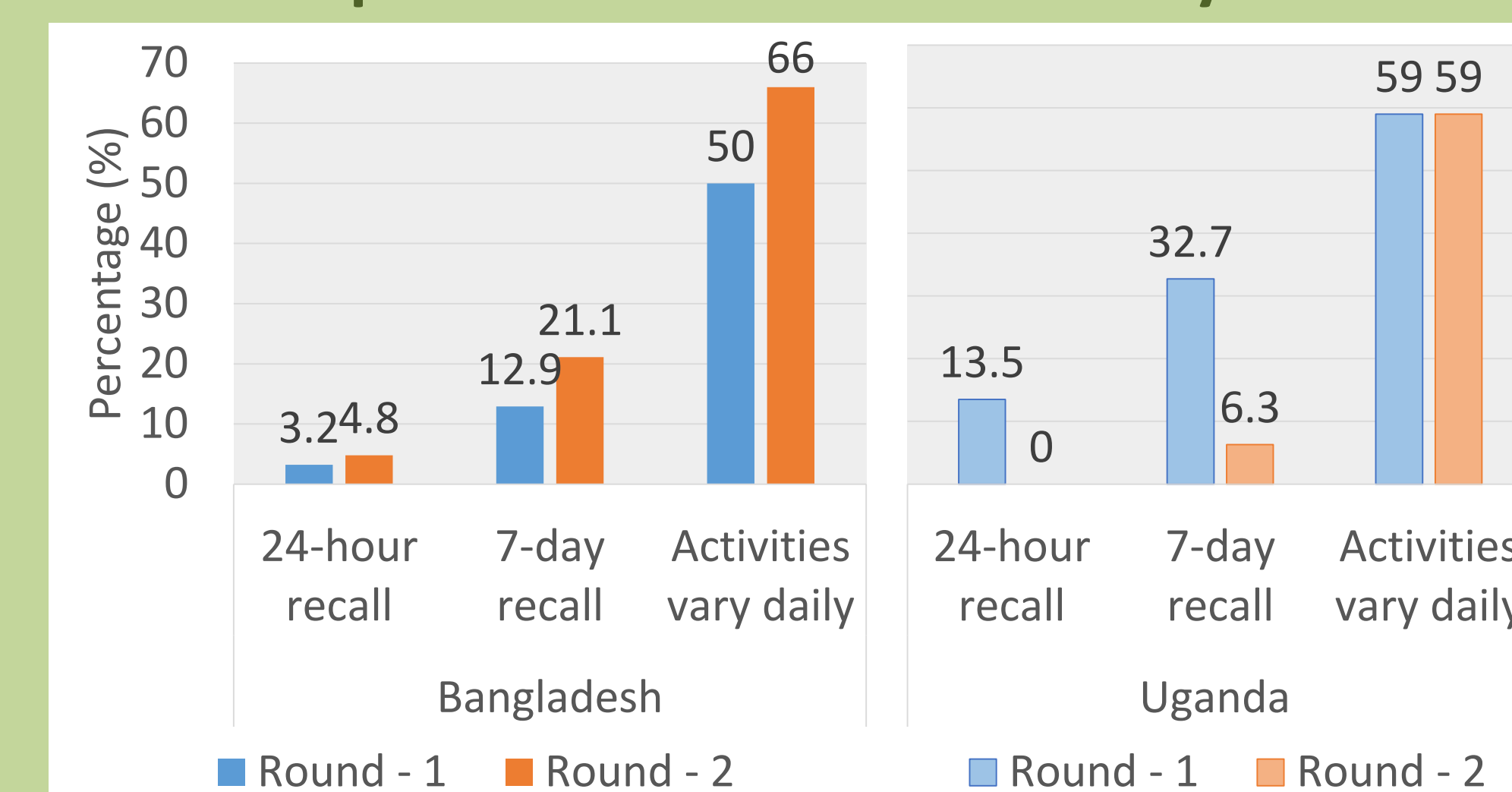
## Key findings

Cognitive testing allowed us to:

- Identify problematic questions during R1 and test modifications to questions during R2 (recall period, complex terms).
- Learn how respondents understood abstract concepts and key terms (have vs own, issues vs anything, etc.).
- Compare the validity of two versions of the same module (24 hr vs 7 day recall, autonomy questions vs vignettes).

Following a series of vignettes about autonomy, respondents were asked how difficult they found the questions and also how difficult they thought others would find them. **There were large discrepancies between identifying something as challenging versus saying others would find it challenging. This indicates cognition issues (Johnson 2014).**

Figure 1 – Time use module difficulty: Comparison of 24-hour and 7-day recall



**Easier for respondents to give a detailed recall of the past 24 hours rather than for select activities in the past 7 days.**

"[PERSON'S NAME] grows the crops for agricultural production that her family or community expect. She wants them to approve of her as a good farmer. Are you like this person?"

**Bangladesh: Few reported difficult. 29-39% reported others would have difficulty.**

"Was this question easy or difficult?"  
"Do you think others would find this question easy or difficult?"

**Uganda: 7-14% reported difficult. 29 – 60% reported others would have difficulty.**

## Questionnaire

- Cognitively tested a streamlined version of the original WEAI and a new version of the WEAI with new and/or adopted questions and modules.
- Cognitive interview consisted of ~100 questions based off of Johnson et al's (2015) cognitive testing of the original WEAI.

## Data

- Data from two rounds of pre-testing conducted in Bangladesh and Uganda in June – July 2014.
- The Uganda sample includes rural households in the Jinja, Kiryandongo, and Mukono districts; the Bangladesh sample includes rural households in Chaturia district. Samples comprised of 2/3s women, 1/3 men residing in dual headed households and female headed households, including men and women from various age ranges.
- For cognitive testing it is recommended to conduct 10 – 15 interviews per language group (Willis 2007). In Bangladesh, with one main language group, 70 interviews over two rounds were conducted. In Uganda, with four main language groups, 120 interviews over two rounds were conducted.

Table 2: Example from survey

ASK RESPONDENT			
QNo.	Question	Response	Skip
Q82	Earlier I ask you if you felt comfortable speaking in public about issues that are important to you, your family, or your community. How was this question? Was this question easy or difficult? (refers to G6.01)	Easy.....1 Difficult...2	Q84
Q83	Why was it difficult? WRITE RESPONSE DOWN		
Q84	Can you tell me in your own words what it means when I say "issues that are important to you, your family, or your community"? WRITE RESPONSE DOWN		

## Literature cited

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