Spanish adaptation of a pictorial assessment of Diet Quality

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ABSTRACT

Background: Latinos are disproportionately affected by nutrition-related conditions. A proportion of Spanish-speaking individuals have limited ability to speak English. Linguistically and culturally appropriate evaluation tools are necessary to obtain valid and reliable dietary data from this population. Previous research has shown vegetable variety to be a proxy for diet quality and can serve as an alternative to the more burdensome 24-hour diet recall.

Objective: To describe the process of adapting a pictorial diet quality assessment tool to be used with low-income Spanish-speakers.

Methods: A 3-step process was followed (Figure 1). After going through each step, proposed changes were verified (Step 3) and tested in subsequent cognitive interview rounds (Steps 2 & 3). Steps 2 & 3 were iterated until no further changes were identified by respondents.

Cognitive Interviews: Convened experience sample of 16 Spanish-speaking participants recruited from Haas Start, WIC, and a pediatric medical clinic in Northern California. Interview questions shown in Figure 2 covered relevance to actual consumption, as well as clarity, suitability, and appropriateness of pictures.

A total of 4 rounds were conducted:
- Round 1, n = 6
- Round 2, n = 3
- Round 3, n = 5
- Round 4, n = 2

RESULTS

FIGURE 1. Iterative Adaptation Process

1. forward translation
2. cognitive interviewing
3. final version

Subject matter expert examination of nutritional & cultural relevance

Vegetable Category Changes

5 vegetable categories were removed from the original translated tool after deemed irrelevant according to respondents feedback (Figure 3):
- Artichoke, Asparagus, Brussel sprouts, Eggplant, and Mushrooms

4 vegetables were grouped into 2 categories:
- Peppers (red peppers, green peppers)
- Spinach & other dark greens (spinach, kale, & other dark greens)

5 items were added upon respondent indication of usual consumption (Figure 3):
- Chayote squash, Dried peppers, Nopales (cactus), Tomatillos, and Vegetable juice

The final tool comprises 24 vegetable category items and 5 supplementary questions

Supplementary Question Changes

5 questions were included to collect additional information on habitual consumption and eating habits; 1 question was replaced and 2 were modified for cultural relevance:
- “I cook from scratch” was replaced with “I plan my meals”
- Inquired frequency on eating out and eating fast food items changed from “per week” to “per month”

Picture Changes

All pictures were tested for clarity, suitability, and appropriateness:
- No changes were made to pictures in 5 items
- Both pictures were replaced in 2 items
- One of two pictures was replaced in 5 items
- A picture of a family eating at a regular restaurant (no fast food) was added to the supplementary question on eating out.

FIGURE 2. Cognitive Interview Domains & Questions

Clarity
- Can you tell me what food is represented in this picture?

Relevance
- Do you eat this vegetable?
- How often do you eat this vegetable?
- How do you prepare or cook this vegetable?

Suitability
- Do you think the vegetable is well represented by these pictures?

Appropriateness
- What pictures would better represent this vegetable?

CONCLUSIONS

Content and face validity of a pictorial vegetable variety tool was achieved upon the application of a multistep, iterative adaptation process that targets cultural and nutritional relevance. This tool is appropriate to use with Spanish-speakers as a proxy of diet quality.

REFERENCES

4. Test TV, Develop Empty Closet Measurement, Oxford University Press; 2009

BACKGROUND

Spanish is the most commonly spoken language in the U.S. after English.1 Understanding the linguistic and cultural needs of Spanish-speaking audiences is necessary to effectively reach this population, at high risk of diet-related diseases.

Vegetable variety has been found to be a reliable proxy of diet quality, and a sensitive alternative to the more burdensome 24-hour recall.2 Following principles of information-processing theory, a simple tool to collect data on vegetable consumed regularly but not shown in the tool, habitual intake of recorded vegetables, cooking from scratch, eating out, and food consumption. Each vegetable category has a one- or two-word identifier, and is accompanied by one, two, or three photos depicting the vegetable in question – usually one photo of a fresh vegetable and a representation of a typical use of the vegetable. This approach – minimum wording along with image usage – is especially suitable for presenting information to low-literate and English as a second language audiences.

OBJECTIVE

To describe the process of adapting and face-validating a pictorial vegetable variety assessment tool to be used with Spanish speakers.

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