ACCURACY OF SPANISH TRANSLATION OF ALCOHOL SCREENING QUESTIONNAIRES FOR USE IN BRAIN AND BEHAVIORAL HEALTH RESEARCH

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BACKGROUND

- Native Spanish-speakers (excluding bilingual speakers) represented 13% of the U.S. population in 2015
- Spanish-speaking population in the U.S. is projected to continue to grow and surpass Mexico as the largest Spanish-speaking country in the world
- Alcohol use in pregnancy, including among Spanish-speaking women, affects 1 in 10 U.S. women.
- Prevalence of Fetal Alcohol Spectrum Disorder in the U.S. has been estimated between 1-5% in school-age children
- The rising population of U.S. Spanish-speakers necessitates availability of Spanish-language tools to measure alcohol consumption during pregnancy and throughout all life-stages

RESEARCH OBJECTIVES

Characterize quality of Spanish translations of alcohol screening questionnaires:
1. **Examine fidelity of Spanish translations to English item meaning**
2. **Assess appropriateness of translations for U.S. Spanish-speakers**

METHODS

Translation source:
- Spanish-translations of alcohol screening questionnaires compiled from peer-reviewed articles, government-agencies and universities:
  - AUDIT-10 (1 translation)
  - CAGE (4 translations)
  - TWEAK (1 translation)
- The AUDIT-10 is produced and validated in several languages, including Spanish, by the World Health Organization.

Validation:
- AUDIT and two versions of CAGE were validated in Spanish.
- Two versions of CAGE and the TWEAK translation were not validated

Assessment of translation quality:
- Each Spanish item was back-translated to English separately by two bilingual English/Spanish speakers with university degrees in Spanish.
- Back-translations were unified and differences in meaning and dialect compared.

METHODS Cont.

Assessment of translation quality continued:
- Noted applicability to U.S. Spanish-speakers in use of dialect-specific vocabulary in each item

Scoring:
- Items were scored on translation quality compared to the standard English version and averaged across each questionnaire:
  - 3-"exact" translation
  - 2-"emerging:" minor differences from standard English version only
  - 1-"different:" major difference in meaning from standard English version

RESULTS

AUDIT-10:

- AUDIT-10 received a strong translation score (2.70) indicating that most items were "exact" translations
- Vocabulary was dialectally appropriate for U.S. Spanish-speakers
- Differences among "emerging" translations were slight:
  > *¿Con qué frecuencia toma 5 o más bebidas alcohólicas en un solo día [in a single day]?*
  > *English item: "How often do you have 5 or more drinks on one occasion?"*

CAGE:

Validated versions of CAGE, scored 2.75 (Saitz et al.) and 2.25 (Pedrero Perez et al.).
- Strengths of Saitz et al. and Pedrero Perez et al. versions: "exact" translations.
- "Emerging" translation example (Pedrero Perez et al.):
  > *"¿Alguna vez lo primero que ha hecho por la mañana es beber alguna bebida alcohólica [drinking an alcoholic beverage] para relajarse o para eliminar resaca [to relax or to eliminate a hangover]?*
  > *English Item: "Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?"*
- This example uses "relax" for "steady your nerves," while an "exact" translation would be "*calmar los nervios o quitarse la resaca*"
- Weaknesses of both: study-sample populations and dialect-specific vocabulary that exclude some speakers (example of dialectal inclusivity in TWEAK):
  > Regional translations of "*hangover,*" as "*resaca*" (Spain/South America) or "*goma,*" (Central America)

RESULTS Cont.

Non-validated versions of the CAGE scored 2.5 and 2.25
- Strengths: some "exact" translations.
- Weaknesses: "emerging" or "different" translations:
  > *¿Alguna vez ha necesitado beber por la mañana para calmar sus nervios o eliminar molestias por haber bebido la noche anterior [eliminate discomfort from drinking the night before]?*
  > *English Item: "Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?"*
- Exact translations for "hangover" abound in Spanish, no need to approximate as above

TWEAK:

TWEAK translation (VIDA, P.I. Vasquez) scored 2.40
- Strengths: broad dialectal representation:
  > "Hangover" as "resaca, cruda, guayabo, goma, chuchaqui, ratón."
- Weaknesses: "different" translations:
  > *¿Ha tomado alguna vez una bebida [have you ever drank] para calmar sus nervios o para quitarse la resaca (cruda, guayabo, goma, chuchaqui, ratón) [to calm your nerves or get rid of a hangover]?*
  > *English Item: "Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?"*
- The key element of the "eye-opener" item of the CAGE is "first think in the morning," not included at all above
- Not able to identify any Spanish translation of the "Hold" item of the TWEAK: "How many drinks can you hold?"

CONCLUSIONS & DISCUSSION

- Need for future efforts in the field of alcohol research to standardize translations of alcohol questionnaires
- Limitations:
  - Restricted literature search to identify translations
- Strengths:
  - Scoring of translation quality
  - Oversight from native Spanish-speaker in back-translation process and scoring of translation quality
- Future directions:
  - Comprehensive literature search for questionnaires
  - Spanish versions of questionnaires must be modified to specific linguistic backgrounds for the target populations
  - It is imperative that translations be validated in heterogeneous Spanish-speaking population in the U.S.