

Guideline Implementation: Translating a New Canadian/U.S. Health Survey into Spanish.

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Background

Articles on the translation of health surveys and medical scales use three general approaches. The first approach emphasizes the qualitative procedures used to produce a translation (1,2,3). It involves multiple reviews that can be sequential or simultaneous. The second focuses on quantitative analysis, by making psychometric comparisons between the scores produced by the two language versions of a scale (4,5). The third, used less often, tests validity by comparing the scores obtained on a symptom scale with diagnostic evaluations or tests by a clinician (6,7,8). Most articles report using some combination of these three approaches. In addition, a few first discuss the relevant theoretical aspects in depth before covering the practical, methodological ones (9,10).

Most of the articles reviewed covered the translation of a defined, English-language scale that was administered to a small, relatively homogeneous patient group. In contrast, the new methodology used in this effort applies to large, multi-topic health or demographic surveys that are administered to heterogeneous, nationally representative samples of the U.S. population on a repeating basis. Such surveys do not usually contain standardized, psychometrically validated scales of the kind described in the literature, so expanded methodology is needed to cover such surveys.

In November of 2001, the Census Bureau convened a panel that included experts from federal agencies in the United States and Canada, private survey research firms, professional translators, and international consultants. They were charged with developing a set of guidelines and best practices to serve as a model for the translation of large-scale health and demographic surveys from English into Spanish and other languages. The resulting guidelines took the methodological approach, rather than psychometric analysis, or clinical validation. They are outlined in *Translation Guidelines and Best Practices for the Translation of English Language Demographic Surveys into Other Languages* by Manuel de la Puente, elsewhere in this volume.

The first use of these guidelines was to translate a new joint Canada/U.S. health survey from English into Spanish. Steps included: 1) selection of the contractor, 2) review of the translation, 3) adjudication, 4) development of the survey instrument in three languages, 5) a field pretest of the survey, 6) selection and training of interviewers; and, 7) incorporation of feedback from the field in revising both questionnaires. This paper* will review the successes and challenges of putting the guidelines into practice for a bi-national health survey.

Methods

The Joint Canada/United States Health Survey (JCUHS) was a collaboration between the governments of Canada (Statistics Canada) and the United States (National Center for Health Statistics) to carry out a single survey in both countries to facilitate comparisons of the health and health care of the two populations. It was a one-time telephone survey, developed between 2001 and 2002, and administered by Statistics Canada from their offices in Canada, between the fall of 2002 and summer of 2003. Households were selected by random digit dialing (RDD). The sample size was 8,700 (5,200 from the United States, and 3,500 from Canada), with one adult interviewed per household.

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The new survey incorporated questions from the Canadian National Population Health Survey (NPHS), the Canadian Community Health Survey (CCHS), and the U.S. National Health Interview Survey (NHIS). As these were ongoing health surveys in each country that were already administered in two languages (English and French in Canada; English and Spanish in the United States), the decision was made to use all three languages in the joint survey (English, French and Spanish). Staff members from Statistics Canada handled production of the French version of the joint survey. Staff members from NCHS handled the translation process for the Spanish version of the joint survey. This presentation will focus on the Spanish translation process.

A few definitions are helpful before describing the procedures. The “source language” is the language of the original text, in this example, English. The “target language” is the language into which the text is translated, in this example, Spanish. “Interpreting” is informally rephrasing a source language speech or text into speech in the target language. Other terms for interpreting include “sight”, “simultaneous” or “on-the fly” translations. The result is a spoken, impermanent version of the translated text. “Translating” is the formal process of converting a written text from the source language into a written text in the target language, using glossaries, examples, expertise, experience, dictionaries, review, and testing. The product is a permanent, written version of the text, in the target language.

Pre-translation Preparation

Recommended. Before beginning a new translation, the expert panel suggested: 1) determining the style and language level needed for the survey, 2) collecting examples of similar surveys, and 3) developing a glossary of specialized terms.

Actual. The JCUHS followed the first two recommendations but not the third. The staff in the agencies of both countries had long experience in developing surveys using clear, correct language, in a structured conversational style, targeted to the 7th or 8th grade literacy level, so that people with low levels of education could understand and respond to the questions. These already fielded questionnaires formed the basis of the questionnaire for the new survey.

The two Canadian questionnaires (NPHS and CCHS) were available in English and French, and the 2000 U.S. NHIS was available in English and Spanish. The translators did not assemble a separate glossary of health, governmental and medical terms. But, they did use translated terms from the existing U.S. questionnaires, which made the standardization implicit rather than explicit. The Canadian questionnaires were not translated into Spanish, so items selected from the Canadian surveys did not have an existing Spanish translation.

Selection of the Contractor

Recommended. The expert panel suggested employing professional firms, with professional translators who had subject matter expertise, rather than using bilingual staff members without professional translation credentials. It recommended reviewing the credentials of the actual staff members who would be doing the translation.

Actual. The JCUHS was able to follow these recommendations, and found a small translating firm in which the principal was a native speaker of Spanish, with a university education in Spanish, graduate work in English, and extensive experience translating health and demographic surveys.

Translation Process

Recommended. The expert panel recommended beginning with a finalized document in the source language to minimize the number of translation versions needed (3).

Actual. Although three existing English language questionnaires were used to compose the survey, it was still necessary to select subsets of questions and synchronize the whole to create a coherent new questionnaire in English. Unfortunately, due to time constraints, for many topics, the survey instrument was not finalized in English before the review. Questionnaire development in English and translation into Spanish had to occur at the same time, which increased the difficulty of providing a final Spanish version in advance of the translation review conference.

Review of the Translation

Recommended. The expert panel suggested several alternate methods to translate and review the translation such as: translation by committee; having two different people translate the whole questionnaire; having two or more people translate alternate sections of the questionnaire.

For one qualitative method, the recommendations of the expert panel differed sharply from the recommendations in the literature. Nearly all of the translations reported in the literature relied heavily on a “forward/backward” technique in which one or more translators translated the English text into Spanish, and a different set of translators translated the Spanish version back into English. The expert panel strongly recommended that back translation not be used for languages in wide use, because it is a crude kind of check compared with committee review and field testing. For rare languages with few informants, back translations might be used of necessity, but should be regarded with great caution, as mis-translations could occur at either translation step, or could even cancel each other out, without such errors being detected by the survey authors.

Actual. The JCUHS used the simultaneous committee approach, reviewing the questionnaire in English and Spanish on a question-by-question basis. The expert committee was composed of the translators, experienced bilingual U.S. Census interviewers, and bilingual survey and subject matter experts from two federal agencies. By origin and experience, the bilingual reviewers represented several Hispanic subgroups including: Mexican, Mexican-American, Puerto Rican, Central American and South American. A bilingual French-English observer from Statistics Canada also attended the review. The French version of the questionnaire was consulted occasionally to aid in the review of the Spanish.

This was the first time that the translators attended the NCHS/Census review committee meetings. The U.S. questionnaire designers and reviewers found it very valuable to be able to discuss the translation directly with the translators.

Adjudication between Alternatives

Recommended. The committee recommended adjudication by a project manager with the authority to make the final decision as a separate step for situations where the reviewers were not able to come to consensus on particular items.

Actual. For the JCUHS, a separate adjudication stage did occur, but not because of lack of consensus among committee members. Rather, because of the tight time frame, the face-to-face committee review occurred early in the translation cycle, while the translation of newly drafted sections of the questionnaire continued for several months. Translation and transmission of both the English and Spanish sections continued by electronic mail after the end of the committee review sessions. The translation project managers of both countries coordinated closely in collecting, allocating and tracking the many iterations of the questionnaire pieces in English and in Spanish.

The U.S. based translation review committee did note a stylistic difference between the JCUHS translation and the field version of the NHIS. Over the years that the members of this committee have worked together, they have developed a concise, yet conversational style that communicates the essential concepts and wording of the original. It uses a syntax that is correct, but more informal, to assure that the questionnaire can be understood and answered by respondents with a low level of education.

Because the translators of the JCUHS were educated in Spanish at the university level, the Spanish translation of the joint survey tended to be more formal than that used in the NHIS. Had there been more time, the ideal would have been to test the translation in the field, and integrate the two approaches.

Developing the Survey Instrument in All Interview Languages

Recommended. The expert panel recommended that the same interview format be used for all languages of the interview, and that, to the extent possible, they be programmed simultaneously. The panel recommended the design of a separate screen for each question in each language, to readily allow for linguistic differences in grammar, syntax and word order. The panel also recommended that the interviewer be able to switch between languages on a question-by-question (or screen-by-screen) basis, as needed. Interviewers can use this capability during the interview to verify the phrasing or meaning of technical terms in the original language, when necessary.

Actual. Statistics Canada already had a wealth of experience in developing a dual language (English and French) Computer Assisted Telephone Interview system (CATI) using Blaise survey software (Windows version). It extended this technology to add the third language, Spanish. Pressing the F2 function key allowed the interviewer to cycle between English and French or English and Spanish for each screen.

Field Pretest of the Survey

Recommended. The expert panel recommended a full field pretest of the complete survey, in all of the languages to be used. A complete field test includes: developing and using training materials, conducting interviews with households from the general population, debriefing the interviewers, debriefing the observers, and revising the questionnaires to take into account the improvements suggested.

Actual. There was not enough time to field a complete field test of the joint survey. Observers from Statistics Canada and NCHS attended the interviewer training and/or the first week of interviews, but the translators and reviewers were not able to attend. There were no formal debriefings, and there was no opportunity to revise the questionnaires between the test and the beginning of full field operation.

Selection of Interviewers

Recommended. After some discussion, the expert panel recommended that potential bilingual interviewers be tested in reading, writing and speaking both languages. Even for Spanish, which has a simplified, phonetic, written form, those with no formal education in Spanish are not able to read some sounds properly.

Actual. The entire joint survey was carried out by telephone from Canada, using Canadian interviewers. Two regional offices carried out the Canadian interviews (Manitoba and Quebec). Two other regional offices carried out the United States interviews (British Columbia and Ontario). Canadian respondents were interviewed in English or French, and United States respondents were interviewed in English or Spanish. Those who interviewed the Canadian sample were fluent in English, French, or both. Those who interviewed the United States sample were fluent in English, and some were also fluent in Spanish (11).

Training of Interviewers

Recommended. The expert panel recommended that at least a portion of the interviewer training be completed in both languages. For the bilingual interviewers, training in the second language should include a discussion of any special aspects of the second language that might affect the interview, and several complete practice interviews in both languages.

Actual. For the Canadian portion of the survey, the training was in English in Manitoba, and in French in Quebec. For the United States portion of the survey, training was entirely in English. Some general tips were given on the health care system in the United States, but there was no formal training on the Spanish version of the questionnaire, and structured practice interviews in Spanish were not included.

Feedback from the Field

Recommended. In addition to feedback obtained during a field pretest, some of the articles on translation suggested that the interviewers be surveyed during regular operations, to see if they had any consistent problems in administering the translated questionnaire.

Actual. In June 2003, Statistics Canada sent a debriefing questionnaire to its field interviewers that included the following questions:

- o For those interviewers who conducted the interview in Spanish, did you come across any complications, i.e. different dialects that may not have been understood?
- o Were language barriers an issue (for example, being understood and understanding the respondent's unfamiliar accents)?

The responses to these questions are not yet available.

Other translation needs that emerged from this experience included:

- o The desirability for early cognitive testing in both languages
- o The need for translations of additional materials such as: letters, household rosters, entry and exit statements, hidden or default responses, and help screens
- o Allowing enough time for the translation and review process to improve the text in both languages
- o Need for paper questionnaires in both languages, as archival resource, and as models for future surveys
- o Documentation of the translation process

Difficulties of the collaboration included: problems in priorities, timing and implementation caused by the split responsibilities for design (both countries) and field implementation (Canada only), the tight time frame, the decreased budget, and the need to adhere to the regulations of two different countries. Unlike the U.S. NHIS translation review, for the Joint Survey, the Spanish translators and reviewers had no contact with the Canadian interviewers, so could not take advantage of their expertise. Benefits of the collaboration included: the experience Statistics Canada already had in producing computerized surveys in multiple languages, and the collegiality between the survey developers of both countries.

Recommendations

Should the Guidelines be changed? No. The recommendations of the panel members reflected years of experience. The panel members learned from each other, and included all the steps that each felt were vitally important. Should the implementation be changed? Yes. Future translations should allow more time, more money, and should follow the Guidelines more closely.

What should survey designers focus on if full implementation of the Guidelines is not possible? While following all of the recommended steps will produce the most appropriate translation of a survey for the target population, if that is not possible, each of the steps selected should be carried out as fully as possible, with attention paid to compensating for those left out. For example, in this case study, following the recommendations for selecting a qualified translator and an experienced review committee probably avoided the most serious translation problems, even in the absence of a full field pretest. If those two recommended steps could not be followed, then a full field pretest, interviewer and observer debriefing, and reformulation of the questionnaires would be essential to counterbalance the lack of a qualified translator and experienced review committee.

Conclusions

This paper outlines the first effort to use the guidelines developed by an expert panel convened by the US Census Bureau in 2001, to translate, test and implement the Spanish version of a new English language questionnaire. The suggestions for carrying out and reviewing the Spanish translation were implemented to the extent possible within a very short time frame. The suggestions on training were implemented for the French version, because the Canadian Federal Government has two official languages and requires the same procedures for both. Because of severe time and budget restraints, it was not possible to fully implement the guidelines for testing or training for the Spanish version of the questionnaire. According to the literature, this pattern is not unusual, either due to the same constraints, or because a completely dual system is not considered from the start.

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