

# Issues of Instrument Translation in Research on Asian Immigrant Populations

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**Health disparity research often includes non-English-speaking populations, and instrument translation is a major methodological issue with which researchers must contend. Yet most existing nursing research do not adequately describe translation method processes used. This article describes the procedures used to translate the Caregiver Reaction Assessment instrument into Ilocano for use in a study with elderly Filipinos caring for their grandchildren and the Parenting Practice Interview into Korean for use in a study of parenting practices among Korean immigrant parents. An explanation of Brislin's method for instrument translation is first provided, followed by a detailed description of how this method was applied in the two studies and the challenges encountered in assessing translation accuracy. Achieving semantic and content equivalence posed a major challenge in both studies. Recommendations for cross-cultural nursing research are provided; the experiences described in this article illuminate translation issues to be considered by nurse researchers. (Index words: Instrument translation; Ilocano; Korean; Filipino; Cross cultural research) *J Prof Nurs* 21:231-239, 2005. © 2005 Elsevier Inc. All rights reserved.**

**T**HE TREMENDOUS GROWTH in cross-cultural nursing research over the past 15 years demonstrates an interest in understanding health phenomena among different cultures and groups of people. This interest has stemmed from a growing ethnically and racially diverse population, particularly

in the United States, and the recognition that health and illness are culturally bound (Chrisman, 1991; Kleinman, Eisenberg, & Good, 1978; Tripp-Reimer, 1984). It has also become clear that certain ethnic and racial minority populations bear a disproportionate burden of illness and that research is needed to address the global health disparities that continue to exist (Flaskerud et al., 2002).

All cross-cultural research with non-English-speaking populations must contend with issues of translation; yet most published literature fail to describe and explain translation processes that were used in detail. As a result, it is difficult to fully understand how translation procedures were implemented or adapted to maintain the scientific rigor of instruments and studies while being culturally sensitive to the populations of interest. Understanding how research methodologies must be adapted to answer research questions in culturally appropriate and meaningful ways continues to be a need in nursing research.

The purpose of this article is to illustrate how translation procedures were implemented in two Asian populations by sharing our experiences with the process. An overview of cross-cultural research and the translation method of Brislin (1970) are presented, followed by a description of its application in studies conducted with Filipino Americans and Korean Americans, with the goal of identifying translation issues, with particular emphasis on semantic and content measurement equivalence, to be considered by other investigators conducting health disparity research.

## Measurement Equivalence in Cross-cultural Nursing Research

Research is considered to be cross-cultural when it compares behaviors across two or more cultures, when it is conducted with a culture different from that of an

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8755-7223/\$ - see front matter

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doi:10.1016/j.profnurs.2005.05.004

investigator's, and/or when it uses instruments that were developed and intended for use in a different culture (Rogler, 1999). Nursing historically has sought to understand cultural differences through qualitative methods (Meleis, 1996), but research can be stronger and richer if multiple methods are used. Quantitative methods in cross-cultural research require careful selection of instruments that maximize the ability to obtain valid and reliable data to be translated. Erroneous conclusions can be made based on faulty selection of measures or on a simple methodological flaw such as instrument translation.

Cross-cultural researchers understand that vocabulary and words do not match up neatly across cultures; researchers aim to ensure that the intended meaning of questions is what the respondents understand while recognizing that even the smallest changes in language can significantly alter the meaning of a question (Harkness, Pennell, & Schoua-Glusber, 2004). Thus, the goal of translation is to achieve measurement equivalence in a given tool (i.e., a semantic and content equivalent version of an instrument that is culturally appropriate; Brislin, 1970; Cauce, Coronado, & Watson, 1998). Equivalence has been defined by cross-cultural researchers in many ways and using different terms (Cauce et al., 1998; Chang, Chau, & Holroyd, 1999; Flaherty et al., 1988; Jones, Lee, Phillips, Zhang, & Jaceldo, 2001; Phillips, de Hernandez, & de Ardon, 1994) but is essentially a form of establishing validity that can be conceptualized along two general dimensions: semantic and content equivalence.

*Semantic equivalence* is the degree to which item meanings are similar in two cultures after they have been translated: Are the items read and understood in the same way in both cultures? *Content equivalence* refers to the extent to which a construct holds similar meanings and relevance in two cultures: Does the overall construct under investigation maintain the same meaning and relevance in both the culture of the original instrument (source) and the culture into which the instrument is being translated (target)? Or, is the construct culturally relevant to the phenomenon under study (Chang et al., 1999; Flaherty et al., 1988; Yu, Lee, & Woo, 2004)?

### Translation Issues

Translation of research materials is the first step in conducting cross-cultural research with non-English-speaking populations. The most common translation method used by nurse researchers is the translation–

back translation method, but there is wide variation in how this method is actually implemented. In its simplest form, the source document is translated into the target language by a bilingual person and then independently translated back into the source language. Discrepancies are then negotiated between the two translators (Brislin, 1970).

However, several issues arise when using a simple back translation method. First, some content areas are more linguistically and conceptually challenging, posing difficulty for the two translators involved. For example, symptoms of depression in one culture may not accurately reflect depression in another culture or idiomatic phrases (e.g., “I feel blue”) may not translate into another language. Second, translated instruments are typically intended for monolingual respondents. Bilingual persons often unconsciously adopt language mannerisms and concepts of the source language culture that may not be identified during the translation process. Third, bilingual translators may literally translate a document and retain the grammatical form of the source language. The back translation is then very straightforward and correct but the translated version is grammatically awkward. Lastly, bilingual persons who back translate may automatically correct for any grammatical error or awkward syntax in the back translation because they are able to discern the intent of the original question. Monolingual respondents however will likely not have this ability, resulting in confusion over instrument items (Brislin, 1986,1970; Harkness et al., 2004).

### Brislin's Translation Method with Decentering

To address the limitations of the simple translation–back translation method and based on findings from his own research, Brislin (1970,1980) recommended a seven-step procedure that incorporates a decentering process described by Werner and Campbell (1970). Decentering involves developing equivalent or near-equivalent sentences that correspond to sentences in the original source language and is accomplished by multiple rounds of translations. Through this iterative process, the final document is believed to be semantically and content equivalent. The seven-step procedure (Brislin, 1970,1980) is as follows:

1. Prepare the English version of the instrument or write an English form that is likely to be translatable (i.e., free of colloquialisms and idiomatic phrases);

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