Translation and back-translation in qualitative nursing research: methodological review

Hsiao-Yu Chen and Jennifer RP Boore

Aims. To examine the effects of the procedure of translation and the techniques used on the collection and interpretation of original language qualitative data for English presentation.

Background. Nursing and health research increasingly use qualitative research for a broadened perspective on practice and research. In numerous qualitative nursing research papers, data are collected in the original language (example Chinese) and the findings are presented in English. No standardised procedures exist for evaluating the influences of translation on the trustworthiness of qualitative data in nursing research.

Design. Translation and back-translation related literature review was conducted.

Methods. This is a methodological review paper.

Discussion. This paper discusses the factors influencing the quality of translation including translator, back-translation, culture and language. Additionally, the translation procedures reported in the literature and the author’s experiences are considered.

Conclusions. The translation procedures described in qualitative nursing research can be summarised as:
1 Verbatim transcription of the content in original language, and then analysis of content;
2 Two bilingual translators are necessary to translate the emerged concepts and categories;
3 Back translate is employed;
4 An expert panel committee is involved in reaching final agreement on the translation.

Relevance to clinical practice. Development of the translation procedures could provide qualitative nursing researchers with a guide when collecting data in one language and presenting results in another language. In this way, the necessary rigour in qualitative nursing research could be achieved.

Key words: back-translation, China (Taiwan), methodological review, nurses, nursing, qualitative research, translation

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Introduction

Nursing and health research increasingly use qualitative methodologies for a broadened perspective on practice and research. Numerous qualitative nursing research data have been collected in the original language (e.g. Chinese) and the findings presented in English. Specific procedures are involved in translation and back-translation and the researcher needs to consider equivalence of meaning as the most important aspect of translation.

Collecting qualitative data in one language and presenting the findings in another involves researchers taking translation-related decisions that have a direct impact on the trustworthiness of the research and its report (Birbili 2000). By taking one language and turning it into another, the translators perform a multifaceted activity of information processing. The translator, therefore, has an active role to play in exploring the potential for bringing the second language as close as possible in meaning to the original language through translation (Keiichiro 2001, Wu 2006).

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Factors influencing the quality of translation

There are many factors influencing the quality of translation in qualitative nursing research, including the translator, back-translation, culture and language.

Translator

A translator is a person whose job involves translating writing or speech from one language to another (Collins Cobuild 1996). However, when qualitative nursing research is conducted in the original language and presented in another, the researcher has to decide who will take the responsibility for the translation. Factors which affect the quality of translation in research include the linguistic competence of the translator and the translator’s knowledge of the people under study (Birbili 2000). Therefore, it is important that the translation is conducted by a translator who is truly bilingual (who is able to speak the original and target languages equally well) and who is sufficiently educated to have familiarity with the concepts and the relatively formal language presented in the record forms. In the author’s previous study, two translators were involved. Because the first author is truly bilingual and familiar with the people under study, she was one of the translators (Chen & Boore 2007, 2008). The second translator used was bilingual, with Chinese as a first language and with experience in nursing practice and research. However, if the researcher is not completely fluent in the target language (such as English), then two translators are necessary in addition to the researcher.

Back-translation

The most common and highly recommended procedure for translating is back-translation. Back-translation is translating from the target language (e.g. English) back to the source language (e.g. Chinese) and the equivalence between source and target versions can be evaluated (Brislin 1970, Chapman et al. 1979). Back-translation is appropriate, whether the research goals are comparative or operational, once the content of the items has been established. In addition, back-translation procedures should be applied to the test instruments as well as the items themselves (Jones et al. 1992, 2001). Therefore, the back translator should be well knowledgeable about both original and target languages, truly bilingual and familiar with the area under study in the source materials (Bracken & Barona 1991).

The researcher should consider replication of the translation and back-translation processes until it makes sense in both the original and target languages (Maneesriwongul & Dixon 2004). This is necessary because if translation and back-translation is not done well, this could result in reporting research findings that are not true, especially in qualitative nursing research. In the previous study (Chen & Boore 2007, 2008), a colleague (bilingual, with Chinese as a first language and with experience in qualitative nursing research) undertook the back-translation. Heretofore,

Well-executed translations, evaluated with the most rigorous methods available, are sufficiently powerful to detect differences in the equivalence of meanings of items across languages (Candell et al. 1986). Language is only one entry point into a culture and a wide open entry point at that. In this view, there is no ‘wrong’ translation, just different versions, with the original depending for its existence on the translation as much as the other way around (Temple 1997). However, the difficulty is that translating relates not only to language but also to culture. The researcher aims to render a translation that is as close as possible in structure and format to the original language, carefully considering the cultural nuances attending the use of the translation (Cruz et al. 2000). For example, in the author’s previous paper (Chen & Boore 2007), a concept such as ‘suffering’ translated direct from Chinese is ‘pain’. However, suffering is a complex human response to which there are physical, psychological, social and spiritual spheres (Liu et al. 2007). Kahn and Steeves (1986) defined suffering as an individual’s experience of threat to self and is a meaning given to events such as pain or loss. Suffering is not grounded in the specific cause or stimulus but derives from the individual’s evaluation of the significance or meaning of the pain experienced. Pain implies a focus on an unpleasant, distressful and uncomfortable feeling (Cheng et al. 2003). Spinal cord injury affects every aspect of the person’s self (Chen et al. 2005). Therefore, a client states that his perception about suffering from a spinal cord injury relates to the meaningfulness of such threat to the integrity of his own experience of personal identity (Kahn & Steeves 1986, Lohne & Severinsson 2005).

Much literature has illustrated the multi-step process of instrument translation and evaluation of translation adequacy in published quantitative nursing research (Maneesriwongul & Dixon 2004, Wu 2006). However, very limited literature exists in relation to the translation procedure in qualitative nursing research.

The purpose of this paper is to examine the influence of translation on the expression of qualitative data and results from the original language when presented in English. The goal is to offer suggestions that will achieve the necessary rigour in qualitative nursing research. This paper includes a discussion of factors influencing the quality of translation and developing an adequate procedure for translation in qualitative nursing research.

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back-translation methods were applied so that semantic equivalence can be achieved.

**Culture and language**

It is important that the translator is fluent in both the source language and target language and is knowledgeable about both cultures. Moreover, the position of researcher and translator relative to each other may be important (Temple 1997, Birbili 2000). For example, researchers who use translators need to acknowledge their dependence on that translator not just for words but to a certain extent for perspective. Furthermore, translators make decisions about, for example, how much detail to include, how to punctuate or where to note the tone in which a comment was made. When different cultures and language are involved epistemological difficulties in identifying similarities and differences are compounded. The most important accounts are trying to convey meaning using words other than the literally translated equivalents. These aspects of the translation require the involvement of both researcher and translator.

Twinn (1997) carried out a comparison of the categories and themes generated from Chinese and English data sets, the findings suggested that similar categories and themes were developed during the analysis of the qualitative data, whether using Chinese or English as the medium for data analysis. However, Twinn (1998) recommended that the use of translation must be seriously questioned when using the different approaches of qualitative methodology (such as ethnography, phenomenology or grounded theory) and in considering the rigour of the research process.

Language is primarily understood as the channel through which the material world is described and thus understood and labelled (Boutain 1999). The English prose resulting from translation can be varied through word choice, sentence length and sentence construction (Brislin 1970). The process of gaining comparability of meanings is greatly facilitated by the researcher (or translator) having not only a proficient understanding of a language but also an intimate knowledge of the culture. To achieve comparability of grammatical forms and make participants’ words vivid and understandable is necessary (Birbili 2000). In an earlier study, the author (Chen 2004) constantly discussed and debated issues with the other two translators involved in that study, to ensure that conceptual equivalence had been achieved during the research process.

**Adequate translation**

From a review of the literature (Brislin 1970, Bracken & Barona 1991, McDermott & Palchanes 1994, Temple 1997, Chang et al. 1999), adequate translation procedures can be summarised as follows:

1. Translation of original from source language to target language;
2. Blind back-translation;
3. Repeat of steps (1) and (2) until the target language is acceptably equivalent to the source language;
4. Review and modification of the target language version by an adult bilingual committee.

To achieve accuracy in the translation process and to test its effectiveness in a qualitative study, the author used the translation procedures below in her previous study (Chen 2004) (Fig. 1).

The interviews were tape recorded and transcribed verbatim in Chinese:
- The first stage involved translating the Chinese text into English (interview data). As the author is bilingual, she translated these herself. The English was checked by a bilingual English teacher.
- The second stage involved content analysis of both Chinese and English versions of the data categories and themes.
- The third stage involved translation of the concepts and categories from Chinese into English and back-translation to Chinese.
- The last stage was a comparison of the categories and themes generated from the Chinese and English data sets. The author translated the transcriptions herself and asked another Chinese-English bilingual speaker to undertake the back-translation. One potential problem was to identify equivalence of terminology and conceptual meaning.

![Figure 1 Translation procedures in previous study.](image-url)
Therefore, the use of two different translators and outside bilingual reviews helped to validate the translation of the general content. These interventions were appropriate for establishing the trustworthiness of this qualitative nursing study (Twinn 1998, Esposito 2001).

The results showed that similar concepts and categories were developed during the analysis of the qualitative data, whether Chinese or English was used as the medium for analysis. The author did not, therefore, translate all the study data from Chinese to English for analysis in her later study (Chen & Boore 2007, 2008), but analysed data in Chinese and translated the emerged concepts and categories into English.

Translation procedures development in qualitative nursing research

Translation and back-translation of all the data collected in, for example, a grounded theory study, as in Chen (2004), would be exceedingly expensive in both time and cost.

Thus, the following procedure was developed from a review of the literature (Brislin 1970, McDermott et al. 1994, Temple 1997, Chang et al. 1999, Wu 2006) and the author’s previous study (Chen 2004). Fig. 2 summarises the following translation procedures developed by the author where data were analysed in the source language and translation and back-translation only carried out on the analysed data, as used in the later study (Chen & Boore 2007, 2008).

First, the content of interviews and observations data were transcribed verbatim in Chinese and then the data were analysed. After the concepts and categories emerged, the author translated them into English herself and asked another bilingual colleague, who is fluent in both Chinese and English and is a nursing lecturer, to translate them as well. The final English version was reached by agreement between both translators. The next step was to ask another bilingual colleague, who is fluent in both Chinese and English and is a nursing lecturer, to translate them as well. The final English version was reached by agreement between both translators. The next step was to ask another bilingual colleague, who is fluent in both Chinese and English and is a nursing lecturer, to take the English version and back translate the concepts and categories from English to Chinese. These initial two steps were repeated as necessary to reduce any discrepancies that existed between the original version and the back-translation. To gain conceptual equivalence and use of words which most native speakers would understand, an expert panel committee was involved. The expert panel committee included the author (bilingual), her colleague (bilingual, with Chinese as a first language and with experience in qualitative research), a participant in the study (a Chinese monolingual), an English teacher (an English monolingual) and a professor in the School of Nursing (an English monolingual). Discrepancies between the source language (Chinese) and target language (English) were reviewed and discussed by the panel of experts until agreement on meaning was reached.

Discussion

No standardised procedures exist for evaluating the influence of translation on the trustworthiness of data in qualitative research. This discussion identifies some key issues and makes some recommendations about the practice of translation.

The two figures presented represent development of translation procedures in qualitative nursing research, through two studies. The distinction between these two figures, as stated above, is that it is not necessary to transcript the data content verbatim, but only the concepts and categories following analysis as shown in Fig. 2. Therefore, time, finance and effort are saved.

On the other hand, the use of one or two translators can still be debated. If using only one translator as Twinn (1997) suggested, consistency in translation is obtained and reliability in the analysis of data can be maximised, but the translator translated all the interview content, involving considerable time and finance. The author suggests that
translating concepts and categories only is satisfactory. However, to achieve high quality of translated transcripts and being aware of possible errors in translation, the use of two translators is recommended. Resolving time and financial issues by only translating the concepts and categories facilitates the use of two translators.

Another question which arises is that of the necessity of back-translation. Most researchers recommend that back-translation is necessary (Brislin 1970, Jones et al. 2001, Maneesriwongul & Dixon 2004) to ensure the adequacy of the meaning of the translation. Nevertheless, the importance of the translator’s background must be emphasized. It is emphasized that a truly bilingual person with a nursing or related background is a priority.

The complexity of qualitative data and the potential for error in translation leads to the recommendation to use a panel of experts to enhance the rigour of the work. This panel of experts should include those with language, cultural, subject and methodological expertise to ensure adequate debate on the issues that impinge on the translation.

Conclusion

Factors influencing the quality of translation in qualitative nursing research have been considered, including translator, back-translation, culture and language. The translation procedures described can be summarised as:

1. Verbatim transcription of the content of interviews and observations data in original language and then analysis of content;
2. After the concepts and categories have emerged, two bilingual translators are necessary. They will translate the concepts and categories into English and the final English version is reached by agreement between both translators;
3. Another bilingual person translates the English version and back translates the concepts and categories from English to the original language;
4. To gain conceptual equivalence and the words used which most native speakers would understand, an expert panel committee is involved in reaching final agreement on the translation.

Relevance to clinical practice

The translation procedure developed provides the qualitative nursing researcher with a guide for language management when data is being collected in one language and results presented in another language. In this way, the rigour in qualitative research can be maintained while time and financial constraints can be overcome.

Recommendations arising include: undertake the analysis in the source language; use two bilingual translators to translate the concepts and categories into the target language and agree the final translation; have another bilingual person to back-translate the concepts and categories into the source language; use an expert panel with language, cultural, subject and methodological expertise to resolve epistemological and cultural issues.

Contributions

Study design: HYC, JRPB; data analysis: HYC, JRPB and manuscript preparation: HYC, JRPB.

References

Research in nursing practice


Translation and back-translation in qualitative nursing research
