

Questionnaire development: 3. Translation

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Translation of questionnaires is required when information is collected from people of different language groups. The language of the translated questionnaire must be understandable and meaningful to the subject, and the responses must be similar to those obtained from the original questionnaire.

Procedures have been established to assure the equivalence between the original and translated forms. Spielberger and Sharma¹ described four stages in translating a questionnaire: preliminary translation into the second language; evaluation of the preliminary translation; establishment of the cross-language equivalence between the original and the translated questionnaires; and establishment of the reliability and validity of the translated questionnaire.

Preliminary translation

Although a literal translation is preferred it is not always meaningful, as in the Japanese questionnaire in which "out of sight, out of mind" was translated as "invisible and insane". In the Quebec Health Survey the statement "During the past year my life seemed pretty good" was translated as "Au cours de l'année passée ma vie m'a paru plutôt belle". After the question was tested the following translation was proposed: "Au cours de l'année passée ma vie m'a paru assez belle".² A second example from the same survey was the question "During the past week did you lose your temper?" The first translation read "Pouvez-vous nous dire avec quelle fréquence au cours de la dernière semaine vous êtes-vous laissée emporter contre quelqu'un ou quelque chose?", but the final version was changed to "Pouvez-vous nous dire avec

quelle fréquence au cours de la dernière semaine vous êtes-vous mis en colère?"³

The preliminary translation is best done by someone who is aware of not only the overall objective of the questionnaire but the intent behind each question.

Evaluation of the preliminary translation

One method of evaluating the preliminary translation is to rate each item. Expert evaluators are given the original and translated forms and are asked to evaluate each translated item in terms of its content, meaning, clarity of expression and comparability to the original item. Any objections as well as suggestions for improvement are to be listed after each item. The problem questions are redrafted, and the evaluation procedure is repeated until all the items are acceptable.

A second method is back-translation. A translator blind to the original questionnaire is asked to translate the questions back into the original language. The back-translation is then compared with the original questionnaire, and any discrepancies are examined; when applicable, questions are redrafted. This procedure may be repeated several times, ideally with new evaluators, until the translated questionnaire is satisfactory.

If both methods cannot be used, because of time or cost, then back-translation is preferred.

Cross-language equivalence

Once the preliminary translation is acceptable, the questionnaire is tested for cross-language equivalence; this is essential, because a good back-translation is not the only determining factor. Brislin⁴ described factors that can affect the quality of the final product: the standard ways used to translate certain nonequivalent terms or sentences, the ability of some translators to make sense out of a poor translation when back-translating and the tendency of some translators to retain the grammatical structure of their language. These factors may make the questions easy to back-translate but difficult for subjects to answer.

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Cross-language equivalence is tested by administering both the translated and original forms of the questionnaire to bilingual subjects. Usually half of the subjects complete the original questionnaire first; therefore the possible effect the order of administration may have is eliminated. If the answers are the same for the original and translated versions, then the questions are considered equivalent. A high correlation between individual questions indicates cross-language equivalence.

Reliability and validity

The reliability and validity of a questionnaire may not be maintained after the translation process is complete. Therefore, they should be re-established as described in part 2.

Alternatives to translation

Translation is not always possible because of the time and expense involved. In such cases other strategies are available.

The questionnaire may be administered in its original language, but this restricts subjects to those fluent in that language. In addition, if the respondent is incapable of correctly understanding the questions the responses may be inaccurate.

Interpreters may be used to provide simultaneous translation between the interviewer and the respondent. Alternatively, one could employ bilingual interviewers who would read each question in its original language and then ask it in the second language. Such methods are valuable when the respondents are few and vital to a study and when a proper translation cannot be done because of lack of time or money. However, the main disadvantage of these techniques is that spontaneous and unsystematic translation may change the meaning of the questions and thereby bias the results.

The final test is the pretest, which will indicate how the questionnaire will perform in the field. Before the pretest the researcher would most likely set up a code book so that the coding system could also be pretested. The code book will be discussed in the next issue.

References

1. Spielberger CD, Sharma S: Cross-cultural measurement of anxiety. In Spielberger CD, Diaz-Guerrero R (eds): *Cross-Cultural Anxiety*, Hemisphere Pub, Washington, 1976: 13-28
2. Kovess V: *Évaluation de l'état de santé de la population des territoires des DSC de Verdun et de Rimouski*, tome II, Unité de recherche psychosociale, Centre hospitalier Douglas, Verdun, PQ, 1985; janvier: 193-225
3. Idem: *Évaluation de l'état de santé de la population des territoires des DSC de Verdun et de Rimouski*, suppl au tome I, Unité de recherche psychosociale, Centre hospitalier Douglas, Verdun, PQ, 1985; janvier: 1-3
4. Brislin RW: Back-translation for cross-cultural research. *J Cross-cult Psychol* 1970; 1: 185-216

Meetings

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June 21-22, 1987

Annual Meeting of the Canadian Coalition for High Blood Pressure Prevention and Control
Halifax Sheraton
Ms. Nancy LePitre, Health Services Directorate,
Department of National Health and Welfare, Ottawa,
Ont. K1A 1B4; (613) 954-8668

June 27-30, 1987

Second Ottawa Conference on Newer Developments in Assessing Clinical Competence
Congress Centre, Ottawa
Dr. Ian R. Hart, Department of Medicine, Ottawa Civic Hospital, 1053 Carling Ave., Ottawa, Ont. K1Y 4E9; (613) 725-4535

July

July 12-15, 1987

International Symposium and Workshop on Verocytotoxin-Producing *Escherichia coli* Infections
Westin Hotel, Toronto
Ms. Sandra Leith, administrative coordinator, Continuing Education, Faculty of Medicine, Medical Sciences Building, University of Toronto, Toronto, Ont. M5S 1A8; (416) 978-2718

July 13-15, 1987

International Symposium on Occupational Asthma
Hyatt Regency Hotel, Vancouver
Secretariat, 801-750 Jervis St., Vancouver, BC V6E 2A9; (604) 681-5226

July 19-22, 1987

The Foundations of Management, Physician Manager Institute
Rodd's Mill River Resort, Woodstock, PEI
Mr. Chuck Shields, Canadian College of Health Service Executives, 201-17 York St., Ottawa, Ont. K1N 5S7, (613) 235-7218, or Mr. Joe Chouinard, Canadian Medical Association, PO Box 8650, Ottawa, Ont. K1G 0G8, (613) 731-9331

July 23-25, 1987

Leadership Skills Development, Physician Manager Institute
Rodd's Mill River Resort, Woodstock, PEI
Mr. Chuck Shields, Canadian College of Health Service Executives, 201-17 York St., Ottawa, Ont. K1N 5S7, (613) 235-7218, or Mr. Joe Chouinard, Canadian Medical Association, PO Box 8650, Ottawa, Ont. K1G 0G8, (613) 731-9331

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